TEMS™ CellPlanner 9.1

Installation Guide

© Ascom, March 2010
All rights reserved

EN/LZT 108 9831 R4A

© Ascom 2010. TEMS is a trademark of Ascom. All other trademarks are the property of their respective holders.

This manual is provided by Ascom without any kind of warranty. Neither Ascom nor its dealers or distributors will be held liable for any damages caused or alleged to be caused either directly or indirectly as a result of using this information.

Improvements and changes in this manual, due to typographical errors or inaccuracies in current information or programs and/or equipment, may be made by Ascom at any time without notice.

No part of this manual may be reproduced, transmitted, stored in a retrieval system, nor translated into any human or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of the copyright owner, Ascom.

EN/LZT 108 9831 R4A

Contents

Chapters 1 - 8 are intended for all users. Chapters 9 and onwards are mainly intended for administrators of TEMS CellPlanner servers (Enterprise Server, Zero Admin Server, License Server), and for advanced users who want to learn about the multi-user environment with shared projects and licenses.

Preface

1 Overview of TEMS CellPlanner 1-1

About TEMS CellPlanner 1-2
Installation 1-2
Product Packaging 1-2
Licenses 1-3
Support and FAQ 1-4

2 Checking Installation Kit 2-1

3 Support Information 3-1

4 System and License Requirements 4-1

System Requirements 4-2
Operating System Dependencies 4-5
Other Considerations 4-7

5 Installing TEMS CellPlanner 5-1

About the TEMS CellPlanner Client 5-2
How to Install TEMS CellPlanner Client - Step by Step 5-2
Export Project Files (at Upgrade) 5-2
Install TEMS CellPlanner Client 5-3
Install the Stand-Alone License File 5-12
Import Project Files (at Upgrade) 5-13
Cancel Installation 5-13
Install Microsoft .NET Framework 3.5 (Optional) 5-14

6 Installing Licenses 6-1

About Installing TEMS CellPlanner Licenses 6-2

Installing Stand-Alone Licenses for TEMS CellPlanner 6-3
Installing Stand-Alone Licenses for Enterprise Server 6-9
Installing Stand-Alone Licenses for Zero Admin Server 6-9
Installing Network Licenses on the License Server 6-9
How to Move a License File 6-10

7 Migrating to New Versions 7-1

About Migration of Projects 7-2
Supported Migration Paths 7-3
Migrate Project Files to TEMS CellPlanner 9.1 7-4
Migrate Database (DB) to TEMS CellPlanner 9.1 7-6
Post-Checks after Migration 7-10

8 Changing RAM and Optional Software Settings 8-1

Change Reservation of RAM 8-2
Enable and Disable Optional Software 8-9

9 Overview of TEMS CellPlanner Components 9-1

TEMS CellPlanner Overview 9-2
Overview of the TEMS CellPlanner Client 9-3
TEMS CellPlanner Servers for Shared Projects 9-3
Overview of the License Server 9-4
Overview of the User Administration Tool 9-5

10 Installing Oracle Software and Creating Database 10-1

About Oracle Database Installation 10-2
Install and Create the Database 10-5
Create TEMS CellPlanner Tablespace 10-16
Create Oracle User for Enterprise Server 10-26
View Listener Port Number 10-32
Oracle Database Administration 10-34

11 Installing Enterprise Server 11-1

About the Enterprise Server 11-2
How to Install Enterprise Server 11-2
Prepare Installation of Enterprise Server 11-2
Export Projects and Account Information 11-3
Create Tablespace in Oracle Database 11-3
Create Oracle User for TEMS CellPlanner 11-4
Stop Enterprise Server 11-4
Install Enterprise Server 11-7
Configure Oracle Connection Parameters 11-13
Initiate Database Tables and Create ADMIN User 11-15

Start Enterprise Server 11-17
View JBoss JMX Attributes (Optional) 11-20
Configure Connection Data and Change Password 11-23
Import Projects and Account Information 11-28
Cancel Installation 11-28

12 Installing Zero Admin Server 12-1

About the Zero Admin Server 12-2
How to Install Zero Admin Server 12-3
Prepare Installation of Zero Admin Server 12-3
Export Projects and Account Information 12-3
Stop Zero Admin Server 12-4
Install Zero Admin Server 12-6
Start Zero Admin Server 12-12
View JBoss JMX Attributes (Optional) 12-15
Configure Backup Location for Zero Admin Server 12-18
Configure Connection Data and Change Password 12-18
Import Projects and Account Information 12-22
Cancel Installation 12-22

13 Installing the User Administration Tool 13-1

About the User Administration Tool 13-2
Install the User Administration Tool 13-3
Cancel Installation 13-7

14 Installing License Server 14-1

About the License Server 14-2
Before Installing the License Server 14-2
Install License Server 14-3
Install Network License File 14-5
Log License Server Usage 14-6
Cancel Installation 14-6
Uninstall License Server 14-7

15 Installing Multiple Components 15-1

Install Multiple TEMS CellPlanner Components 15-2

16 Uninstalling TEMS CellPlanner Components 16-1

Uninstall Selected TEMS CellPlanner Components 16-2
Uninstall All TEMS CellPlanner Components 16-3

17 TEMS CellPlanner in a Citrix Environment 17-1

About TEMS CellPlanner in a Citrix Environment 17-2

Prepare for TEMS CellPlanner in a Citrix Environment 17-4
Install TEMS CellPlanner Client on a Citrix Server 17-4
Use TEMS CellPlanner in a Citrix Environment 17-7

Index **I-1**

Preface

Document Conventions

This document uses the following conventions:

Bold type	Window names, button names, and keyboard keys are displayed as bold text. Example: Click **Edit.**
Menu↗Selection	Navigation in menu paths are displayed as bold text with arrows between menu levels.
`Typewriter type`	File names and literal input and output. Example: `sites.xml`
Italic type	Book titles and definitions are displayed in italic. Examples: *carrier mapping, Technical Reference Manual*
Left-click Right-click	All instructions including mouse clicks assume a mouse configured with the left mouse button as primary button.

Navigation

Use the ALT ← and ALT → buttons to navigate between link jumps in the Manuals.

Assumed Knowledge

This documentation presumes that you have good knowledge about radio network planning principles and the radio technology to plan.

Disclaimer

The parameter values in this manual are just examples to help you getting started quickly, and do not constitute any performance guarantees for the planned equipment of your final network planning.

Proper parameter values depend on the equipment version, the operator's business plan, and the operator's network deployment strategy. Recommended parameter values should be provided by the operator, the equipment vendor or your service delivery organization.

Manuals

The following PDF manuals are delivered with the TEMS CellPlanner software:

Installation Guide

EN/LZT 108 9831 R4A

Describes system requirements, how to install and configure TEMS CellPlanner components and manage licenses, and provides an overview of all TEMS CellPlanner components. The procedures must be performed by a user with administrator privileges on the local computer. Some procedures require that you are an authorized TEMS CellPlanner administrator.

Common Features User's Guide

EN/LZT 108 9832 R4A

Includes Glossary of terms used in TEMS CellPlanner, concepts about licenses, and how use projects, explorer objects used by more than one radio technology, how to add sites and use site tools, filters, plots, neighbors, AMI, tuning propagation models, ASMT (Automatic Sector Model Tuning), puncturing, export and import data, and work with projects on server. Here TEMS CellPlanner administrators find how to administer users, groups and projects on servers shared by multiple users.

Common Features Technical Reference Manual

EN/LZT 108 9833 R4A

Describes radio technology independent algorithms, parameters and file formats.

GeoData User's Guide

EN/LZT 108 9834 R4A

Describes geodata concepts, supported geodata formats, conversion between different map formats, how to use map data tools in TEMS CellPlanner. The chapters about providing and importing map data are intended for administrators of map data. Other chapters are intended for users of map data.

Map Import Wizard User's Guide

EN/LZT 108 9943 R2A

Describes how to import map data using a generic wizard similar to the one provided with TEMS LinkPlanner. The intended reader is administrator of map data.

LTE User's Guide

EN/LZT 108 9944 R3A

Describes how to use LTE functions of TEMS CellPlanner, including analysis, and creation of plots and reports.

LTE Technical Reference Manual

EN/LZT 138 0235 R2A

Describes LTE network planning principles, analysis details for advanced users, and cell ID planning principles.

WCDMA User's Guide

EN/LZT 108 9837 R4A

How to use WCDMA functions of TEMS CellPlanner, including analysis, and creation of plots and reports.

WCDMA Technical Reference Manual

EN/LZT 108 9838 R4A

Describes concepts and overviews of WCDMA algorithms, and HSPA and MBMS in TEMS CellPlanner.

GSM User's Guide

EN/LZT 108 9835 R4A

Describes how to use the GSM functions of TEMS CellPlanner, including analysis, and creation of plots and reports.

GSM Technical Reference Manual

EN/LZT 108 9836 R4A

Describes overlaid/underlaid cell structures, reuse patterns, manual frequency planning, automatic frequency planning (AFP), automatic hopping frequency set (HFS) planning, optimization of BSIC, HSN and MAIO, fractional load planning, and effective subscriber modeling. Also describes the GSM algorithms and file formats used in TEMS CellPlanner.

WiMAX User's Guide

EN/LZT 108 9839 R4A

Describes how to use the WiMAX functions of TEMS CellPlanner, including analysis, and creation of plots and reports.

1
Overview of TEMS CellPlanner

This chapter provides an overview of the TEMS CellPlanner product.

Topics **Page**

About TEMS CellPlanner 1-2
Installation 1-2
Product Packaging 1-2
Licenses 1-3
Support and FAQ 1-4

About TEMS CellPlanner

TEMS™ CellPlanner is a graphical PC-based application for designing, implementing, and optimizing mobile radio networks. It assists you in performing complex tasks, including network dimensioning, traffic planning, site configuration, frequency planning, and network optimization.

Installation

The Installation Guide describes how to install software and licenses.

Product Packaging

The product package includes the software components listed below.

What is actually installed depends on your selection in the installation wizard.

Product Components	Selecting this component installs...
• TEMS CellPlanner *named "TEMS CellPlanner Client" in the manuals*	• Radio Technology Features • Planning Features • Manuals • Map tools, geodata conversion software, demo maps, filters, scripts • Citrix software - relevant only if you are going to offer this TEMS CellPlanner installation as a Citrix service
• Enterprise Server	Enterprise Server software plus the User Administration software
• Zero Admin Server	Zero Admin Server software plus the User Administration software
• User Administration	User Administration software only
• License Server	License Server software only

Some of the components are licensed, see Licensed Components on page 1-3.

The Installation Guide provides an overview of each component and how the components relate to each other.

Licenses

The Installation Guide describes how to install licenses.
The Common Features User's Guide describes how to activate licensed features.

Licensed Components

Three of the Product Components are licensed:

TEMS CellPlanner *named "TEMS CellPlanner Client" in the manuals*	To start TEMS CellPlanner you need a license for at least one of the Radio Technology Features. Additional licenses are required for each of the Radio Technology Features and Planning Features to use.
Enterprise Server	License required to start the server
Zero Admin Server	License required to start the server

Radio Technology Features

Each of the radio technology software modules listed below require an installed and activated license. How to use the radio technology software is described in adherent user guides and technical reference manuals.

- GSM
- WCDMA
- WCDMA,HSPA
- WiMAX
- LTE

Planning Features

Additional planning features can be used together with the radio technology software. These additional software modules require a license for the feature itself and a license for the adherent radio technology:

• Automatic Cell Planning	Requires WCDMA or WCDMA,HSPA license
• Automatic Frequency Planning	Requires GSM license. This license is required also for automatic HFS planning.
• Automatic Measurement Integration and ASMT	Requires license for at least one of the Radio Technology Features ASMT = Automatic Sector Model Tuning.

Support and FAQ

For support and FAQ about TEMS CellPlanner, use the TEMS support web site:

www.ascom.com/networktesting

To provide TEMS support with information when reporting a problem, follow the instructions in chapter *Support Information* in the Installation Guide.

2
Checking Installation Kit

Before installing any TEMS CellPlanner component, check that the following is included in the received installation kit:

- Installation DVD with TEMS CellPlanner software and manuals.
  As an alternative you may download software and manuals from a server.
- For most users: A USB dongle is included in the installation kit if you have ordered a USB dongle locked license and you do not have such a dongle from a previous TEMS CellPlanner installation.

Figure 2–1 USB dongle

3
Support Information

At contact with TEMS Support, you might be requested to provide technical information on your installation to facilitate troubleshooting.

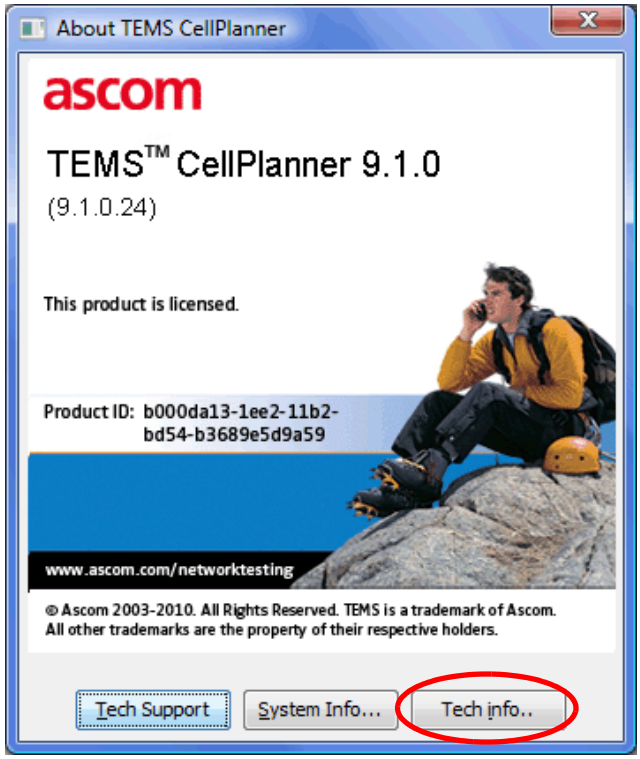
TEMS Support

For information on how to get in touch with TEMS Support, see Support and FAQ on page 1-4.

Procedure

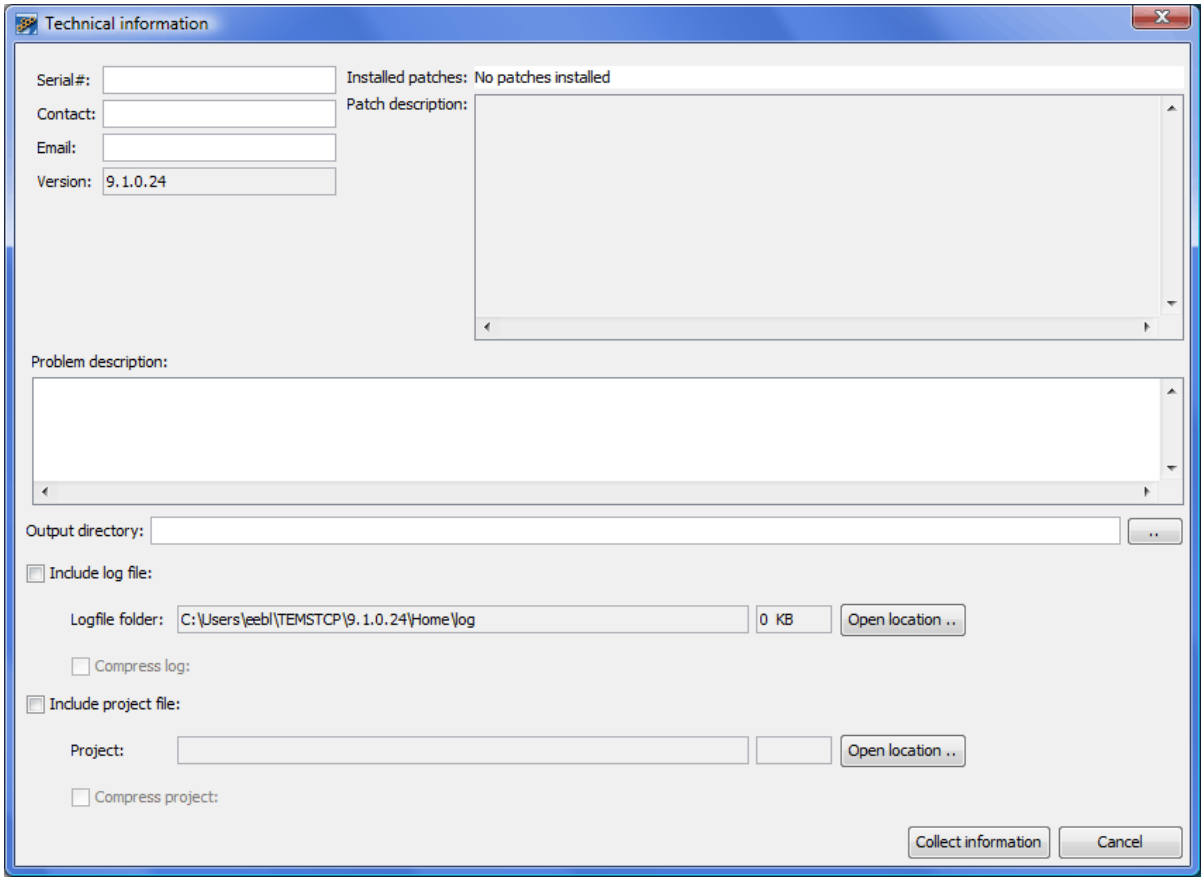
Do as follows to extract the technical information:

1. Select **Help↗About TEMS CellPlanner** from the main window. The About window appears as in the following example:



2. Click **Tech info** to open the **Technical information** window as in the example below, with most information automatically updated from your installation.

In this example the options **Include log file**, **Include project file** and **Compress project** are manually selected; they are otherwise initially unselected:



3. Enter the following information needed by TEMS Support:
   - **Serial #** of the product (on the backside of the DVD cover or on the TEMS CellPlanner box) or order number
   - **Contact** person name or other contact information
   - Your **Email** address
   - Problem description
4. To include the log file from the Logfile folder, select option **Include log file**. Select **Compress log** to decrease the file size.
5. To include the project file from the Project folder, select option **Include project file**. Select **Compress project** to decrease the file size.
6. Enter the path of the **Output directory** where the information will be stored.
7. Click **Collect information**. A set of files with information relevant for troubleshooting TEMS CellPlanner are created in the specified folders.
8. Send the information in the **Output directory** as agreed with your TEMS Support contact.

4
System and License Requirements

This chapter describes the requirements on operating system, hardware and licenses to consider before installing TEMS CellPlanner 9.1.

Topics **Page**

System Requirements 4-2
- Operating System Requirements 4-2
- Hardware Requirements 4-2
- Hardware Recommendations 4-2
- Memory Recommendations 4-3
- Supported Oracle Version 4-4
- Additional Software 4-4

Operating System Dependencies 4-5
- Windows Vista 4-5
- Program Files 4-6
- autorun 4-6

Other Considerations 4-7
- Licenses 4-7
- Citrix Environment 4-7
- ATI Radeon Graphic Cards 4-7

4.1 System Requirements

This chapter specifies the system requirements and recommendations for computers hosting the TEMS CellPlanner applications - TEMS CellPlanner Client, Enterprise Server, Zero Admin Server and License Server.

4.1.1 Operating System Requirements

All TEMS CellPlanner 9.1 applications can be installed on the following operating systems:

- Windows® XP Professional SP3 or later
- Windows® Vista™
- Windows® Server 2008 or Windows Server 2003
  Required for TEMS CellPlanner Client on Citrix server, recommended for Enterprise Server.

The installation package includes TEMS CellPlanner applications compiled for 64 bits as well as 32 bits operating system. The appropriate software is automatically selected at installation.

4.1.2 Hardware Requirements

A DVD driver is required if your TEMS CellPlanner is delivered on DVD.

4.1.3 Hardware Recommendations

The hardware in the tables below is recommended to obtain good performance in a computer hosting TEMS CellPlanner Client or TEMS CellPlanner Server software.

Table 4-1 Recommended Hardware for TEMS CellPlanner Client

Size of Planning Area	Processor	Local Disk [1]	Network Card	Devices[2]
< 3000 sites	Intel® Pentium® IV, 2.5 GHz or similar	>=60 GB	100 Mbps	DVD device
>= 3000 sites	Intel® Core™2 Duo, Intel Xeon or similar	>=100 GB		

1. The required disk size depends on the size of the geodata.
2. A DVD device is required if you install from DVD.

Table 4-2 Recommended Hardware for Enterprise Server and Zero Admin Server

Project Size	Processor	Local Disk [1]	Network Card	Devices[2]
< 3000 sites	Intel® Pentium® IV, 2.5 GHz or similar	>=60 GB	100 Mbps	DVD device
>= 3000 sites	Intel® Core™2 Duo, Intel Xeon or similar	>=100 GB		

1. RAID disk is recommended for performance reasons.
2. A DVD device is required if you install from DVD.

4.1.4 Memory Recommendations

The optimal amount of RAM memory to obtain good performance depends on the project size, and the features used. In the computer hosting the Enterprise Server or the Zero Admin Server, the memory consumption also depends on the number of concurrent users.

In the TEMS CellPlanner Client, the full project size can be filtered to include only the planning area, hence the memory needs in the client rather depends on the size of the planning area.

To use more than 2 GB RAM memory, the TEMS CellPlanner application must be installed on an operating system compiled for 64 bits addressing range.

The estimated memory needed, and the required addressing range, are shown in the tables below:

Table 4-3 Recommended Memory for TEMS CellPlanner Client

Size of Planning Area	Client Usage	Memory Needs	Addressing Range
<1000 sites	• Printing size <=A1 • Medium heavy calculations • Medium size plots • No conversion of high resolution geodata covering large areas	1 GB	32 bits
<1000 sites	• Printing size A0 • Calculating and presenting large plots • Converting high resolution geodata covering large areas	2 GB	32 bits
>=1000 sites	Any usage	>2 GB	64 bits
Any number of sites	TEMS CellPlanner Client installed as Citrix service		

Table 4-4 Recommended Memory for Server

Project Size	Number of Concurrent Users	Memory Needs	Addressing Range
<2500 sites	1-5	<2 GB	32 bits
>2500 sites	5-10	>2 GB	64 bits
>5000 sites	Any number of users		
Any number of sites	10		

4.1.5 Supported Oracle Version

Oracle is a registered trademark of Oracle Corporation and/or its affiliates.

TEMS CellPlanner Enterprise Server 9.1 requires Oracle version 11g. Other Oracle versions may be used but TEMS Support provides no support for those versions.

4.1.6 Additional Software

You might also need the software listed below to use TEMS CellPlanner. All these additional programs can be installed before or after installing TEMS CellPlanner.

Microsoft Installer

Microsoft Installer 3.1 or later is required for installation of .NET Framework.

You can view the currently installed version on your computer by right-click on `C:\Windows\System32\msi.dll`, select Properties, and select the Details tab.

Double-click on `WindowsInstaller-KB93803-V2-x86.exe` to install Microsoft Installer.

.NET Framework

.NET Framework 3.5 or later is required for import of measurement log files from other TEMS tools.

You can view the currently installed version on your computer from the Control Panel, Programs and Features, Microsoft .NET Framework x.x.

Double-click on `dotnetfx35_SP1.exe` to install .NET Framework.

Adobe Reader

You need Adobe Reader to read the manuals.

Download the latest version (freeware) from www.adobe.com.

4.2 Operating System Dependencies

TEMS CellPlanner installation folders depend on the operating system.

4.2.1 Windows Vista

Read this before you install TEMS CellPlanner on Windows Vista.

User Account Control (UAC) in Vista

If the User Account Control (UAC) is enabled you will be alerted every time the operating system is involved during an installation. You must answer to the UAC security questions to proceed with or cancel the installation.

Restrictions to Program Folders in Vista

In this section, "program folder" means `C:\<Program Files>` or any of its subfolders, see Program Files on page 4-6.

Only users with administrative privileges have write permissions to Windows Vista program folders. If you as a non-administrative user attempt to save a file to a program folder from a TEMS CellPlanner application, the file is physically stored in a mirrored program folder in user space. A reading from the program folder first browses under the mirrored program folder in user space, and if not found the reading proceeds with the real program folder.

As a user without administrative privileges **you are not allowed to write any data in the program folder**. If you have administrative privileges you should still not use the program folder for storing data, to use a good praxis aligned with the purpose of extra security in Windows Vista.

You may not write to the program folder from the following TEMS CellPlanner windows:

- **File↗Project settings, General**
- **File↗Project settings, Maps**
- **File↗User settings**
- **File↗New project**
- **File↗Save**
- **File↗Save As**
- **File↗Print** (print to file)
- **File↗Export** (any format)

4.2.2 Program Files

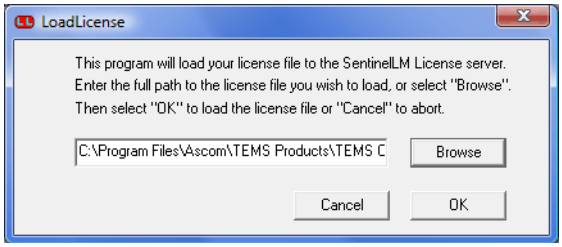
In this manual, paths are written as in the following example:

```
C:\<Program Files>\Ascom\TEMS Products\TEMS CellPlanner
9.1.0
```

where <Program Files> depends on the capabilities of the operating system:

- `Program Files` (any 32 bits OS)
- `Program Files (x86)` (Vista, 64 bits OS)

The screen shots in this manual are captured from a 64 bits OS, hence the examples illustrate the simplest case with `Program Files` in the path. Example:


LoadLicense
This program will load your license file to the SentinelLM License server.
Enter the full path to the license file you wish to load, or select "Browse".
Then select "OK" to load the license file or "Cancel" to abort.
C:\Program Files\Ascom\TEMS Products\TEMS C
Browse
Cancel
OK

4.2.3 Default Installation Folder

All TEMS CellPlanner components are by default installed in:

```
C:\<Program Files>\Ascom\TEMS Products
```

You can change the target folder during installation.

4.2.4 Program Files Write Permissions

The permissions to write to `C:\<Program Files>` and its subfolders depend on the operating system, as shown in the following table:

Operating system	**Permission to write to** `C:\<Program Files>`
Windows XP	All users
Windows Vista	Administrator only
Windows Server 2003	Initially administrator only. Other users may be granted write permission.

4.2.5 autorun

If the *autorun* option is enabled in the operating system, an installation program starts when you insert the DVD. In Windows Vista, this option is named *AutoPlay*.

4.3 Other Considerations

Some additional software and hardware requires special actions by the installer.

4.3.1 Licenses

Before installation, check the time and date settings on the computers where the TEMS CellPlanner applications will be installed. If you attempt to adjust the time settings after the installation, the license may no longer be valid, as a clock tamper detection will then lock the license.

4.3.2 Citrix Environment

Windows 2003 Server is the required operating system, as it includes the Terminal Server functionality required by the Citrix Presentation Server.

4.3.3 ATI Radeon Graphic Cards

Some old versions of ATI™ Radeon™ graphic cards might not work well with Windows® DirectX®. At installation of TEMS CellPlanner Client, the installation program checks the computer to determine if an ATI Radeon graphic card is installed. If so, DirectDraw® is turned off.

Additionally, you can disable and enable DirectDraw in the Application Preferences, see Enable and Disable Optional Software on page 8-9.

5
Installing TEMS CellPlanner

This chapter describes how to install the TEMS CellPlanner Client application.

Topics **Page**

About the TEMS CellPlanner Client 5-2
How to Install TEMS CellPlanner Client - Step by Step 5-2
Export Project Files (at Upgrade) 5-2
Install TEMS CellPlanner Client 5-3
Install the Stand-Alone License File 5-12
Import Project Files (at Upgrade) 5-13
Cancel Installation 5-13
Install Microsoft .NET Framework 3.5 (Optional) 5-14

5.1 About the TEMS CellPlanner Client

The TEMS CellPlanner Client is an end-user application software including functionality to configure and analyze radio network plans.

Note: *The application is named "TEMS CellPlanner" in the installation wizard.*

For more information on the TEMS CellPlanner Client, see Overview of the TEMS CellPlanner Client on page 9-3.

5.2 How to Install TEMS CellPlanner Client - Step by Step

Follow this process to install and setup TEMS CellPlanner Client version 9.1:

1. Export Project Files (at Upgrade)
2. Install TEMS CellPlanner Client
3. Install the Stand-Alone License File
4. Import Project Files (at Upgrade)

5.3 Export Project Files (at Upgrade)

Before upgrading the TEMS CellPlanner Client, use it to export projects in the following cases:

- To reuse **project files** created by TEMS CellPlanner version 8.x.y or older, you must export them to XML before upgrading to the new TEMS CellPlanner software. Follow the instructions **up to and including Export Projects** in Migrate Project Files to TEMS CellPlanner 9.1 on page 7-4.
- To reuse **projects stored in database**, created by TEMS CellPlanner version **7.x.y or older**, these projects must also be migrated using a TEMS CellPlanner Client and a TEMS CellPlanner Server of the same version. If your TEMS CellPlanner Client shall be used to migrate the projects in database, you must have exported the projects to XML before upgrading the TEMS CellPlanner Client software. See Migrate Database (DB) to TEMS CellPlanner 9.1 on page 7-6.

Proceed with Install TEMS CellPlanner Client on page 5-3.

Note: *Do not use this procedure to reuse **projects stored in database**, created by TEMS CellPlanner version **8.x.y or later.** In that case the administrator should migrate the projects without using a TEMS CellPlanner Client.*

5.4 Install TEMS CellPlanner Client

Use this procedure to install a new version of the TEMS CellPlanner Client for the first time, or to upgrade from an older version.

Before Upgrading

If you have project files from any old TEMS CellPlanner version and you want to use them in the new version, export them before upgrading to the new TEMS CellPlanner software. See Export Project Files (at Upgrade) on page 5-2.

Caution: You will lose project data at upgrade if you don't migrate projects!

Prerequisites

- You must have administrator privileges on the computer.
- For upgrading users: Migrate projects, see Before Upgrading on page 5-3.
- For administrators migrating projects in database from a TEMS CellPlanner Client: Stop Enterprise Server if running on this computer.
- For users with USB dongle locked license: Connect the dongle to a USB port.

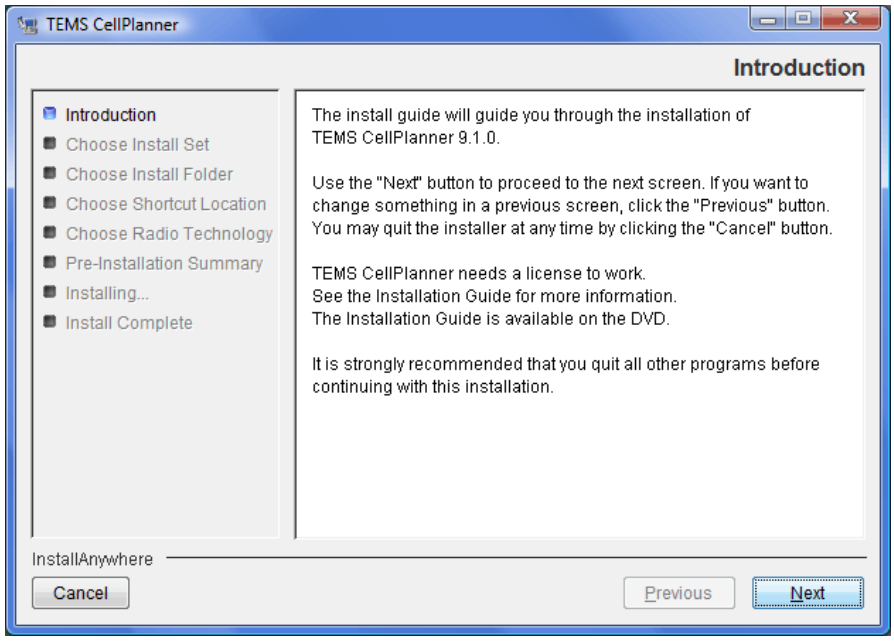
Procedure

1. Start the installation according to how the software is packaged.

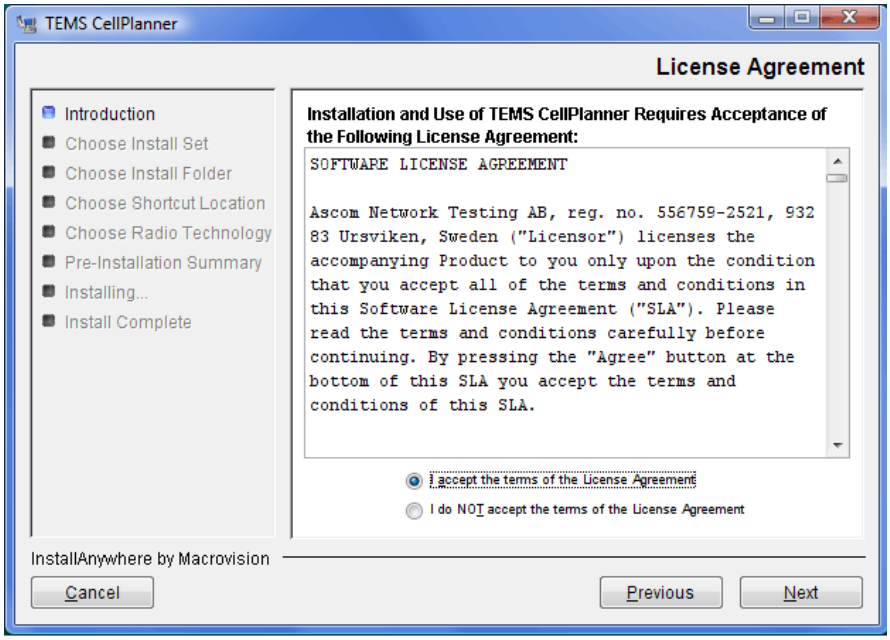
   Downloaded: Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example:
   `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`

   On DVD: Place the TEMS CellPlanner DVD in the DVD drive.
   If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example:
   `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:


TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

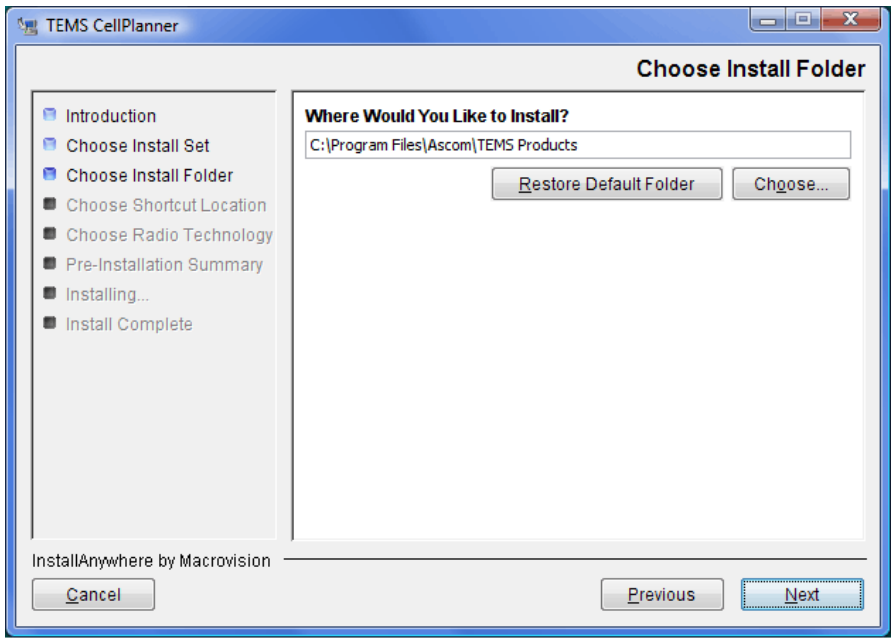
3. Click **Next**. The **License Agreement** window appears, as shown in the following example:


TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

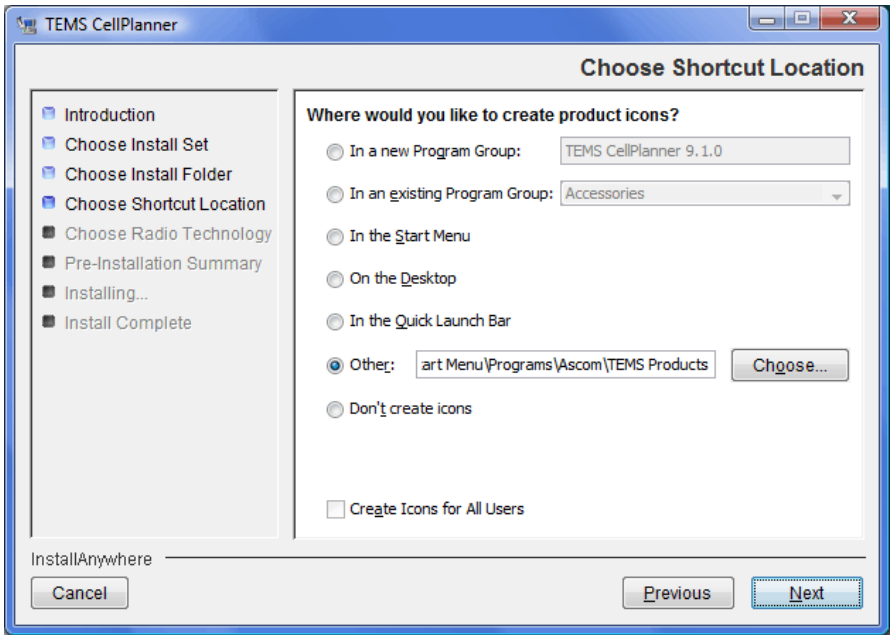
4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next**. The **Choose Install Set** window appears, as shown in the following example:

TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

5. Select **TEMS CellPlanner** and click **Next**. The **Choose Install Folder** window appears, as shown in the example below.



6. Enter the name of the installation folder, or select the default installation folder `C:\<Program Files>\Ascom\TEMS Products`. Click **Next** to continue. The **Choose Shortcut Location** window appears as in the following example:

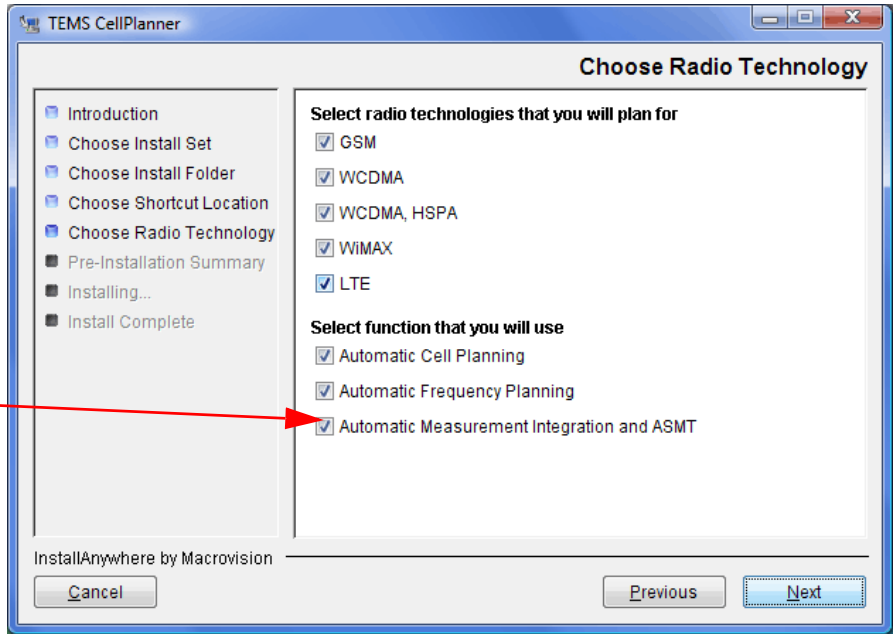


7. Choose where you would like TEMS CellPlanner 9.1 to appear in the **Start** menu, and click **Next** to continue. The **Choose Radio Technology** window appears, and here you select the radio technologies or features whose software modules to install.

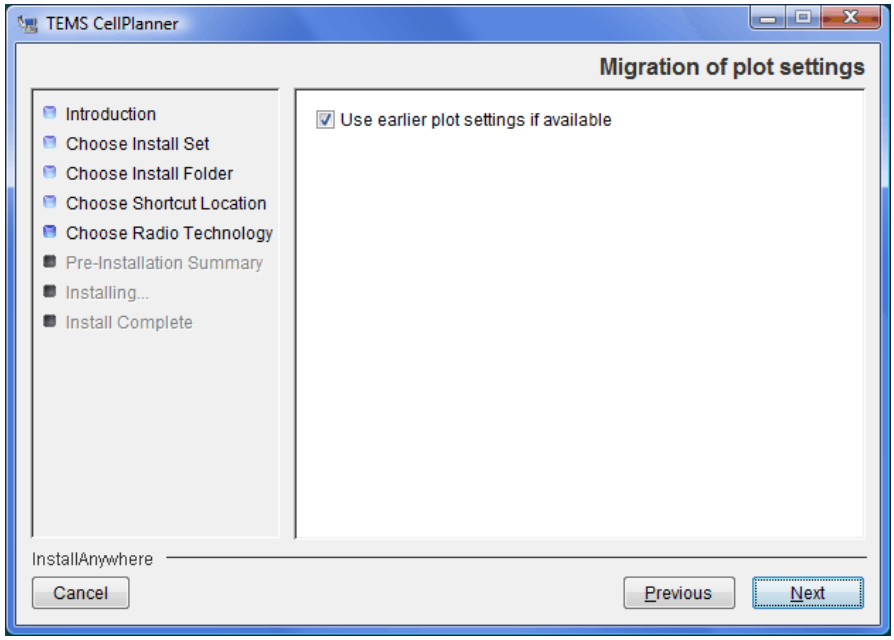
AMI and ASMT share the same license

AMI = Automatic Measurement Integration

ASMT = Automatic Sector Model Tuning



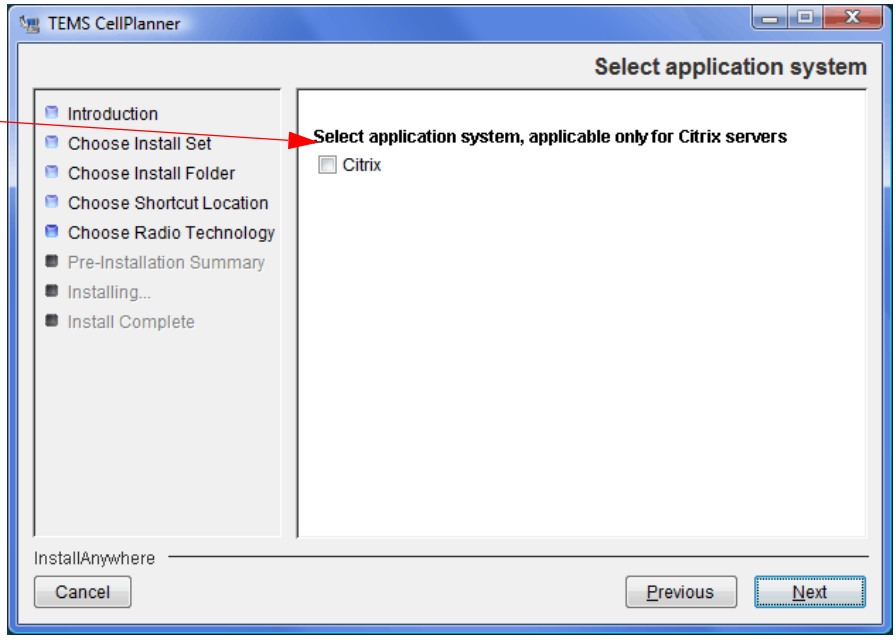
8. Click **Next**. The **Migration of plot settings** window is displayed:



9. You can re-use earlier plot settings by selecting option **Use earlier plot settings if available**. The option is initially enabled.

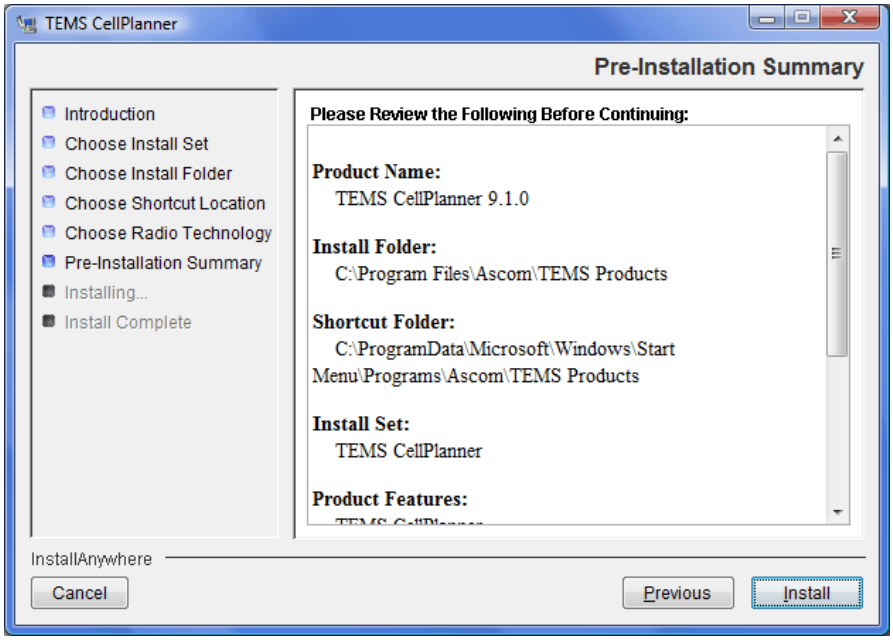
10. Click **Next**. The **Select Application System** window is displayed:

For installation on Citrix server only

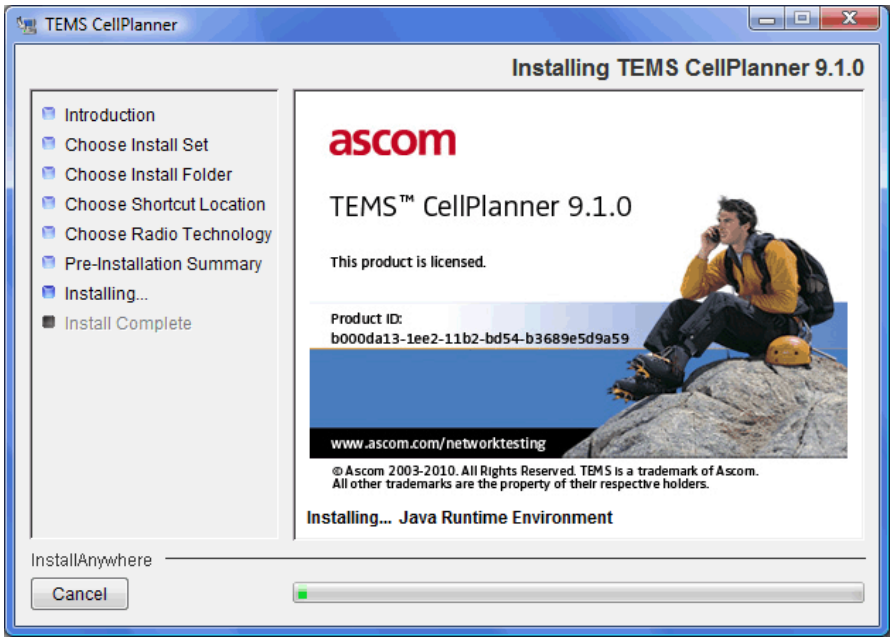


11. Select the Citrix option ***only if you install on a Citrix server***, see page 17-4.

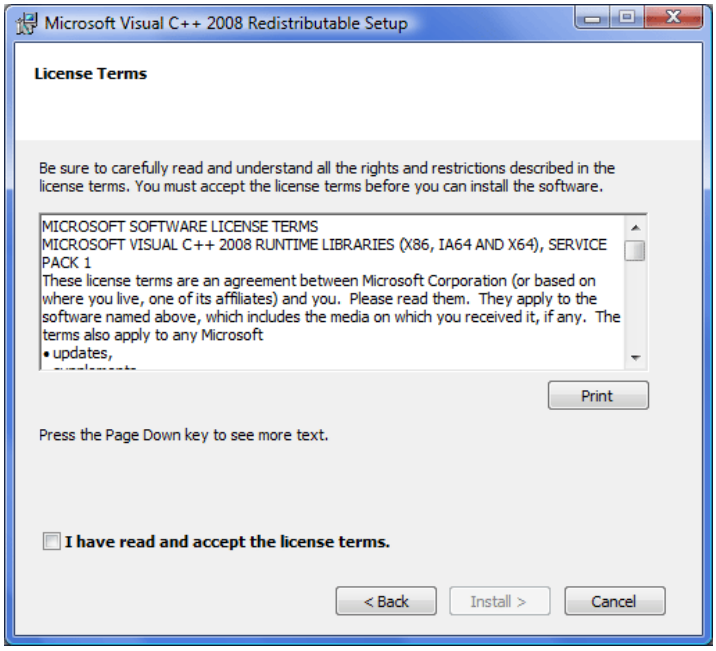
12. Click **Next**. The **Pre-Installation Summary** window is displayed:



13. Select **Install** to complete the installation. The **Installing** TEMS CellPlanner window appears as shown in the following example:

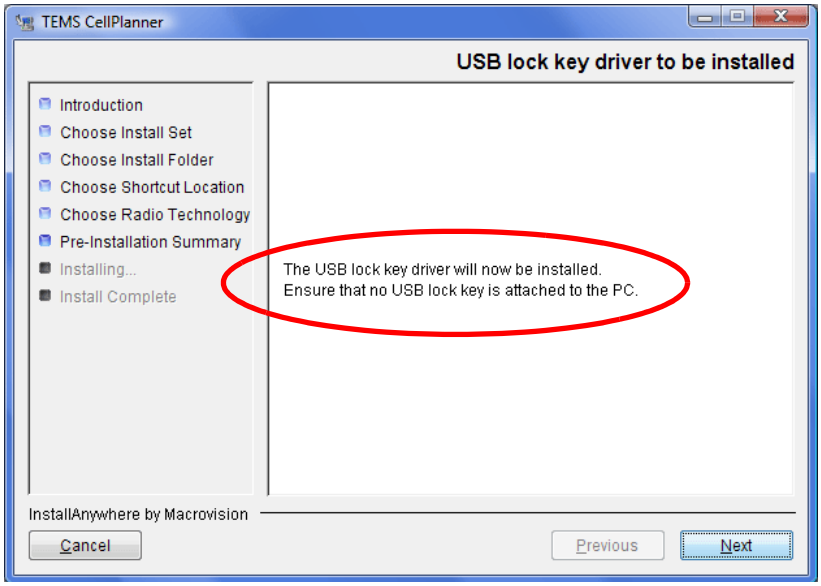


14. On some operating systems, you are asked to accept **Microsoft Visual C++ License Terms** as in the following example:


Microsoft Visual C++ 2008 Redistributable Setup
License Terms
Be sure to carefully read and understand all the rights and restrictions described in the license terms. You must accept the license terms before you can install the software.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT VISUAL C++ 2008 RUNTIME LIBRARIES (X86, IA64 AND X64), SERVICE PACK 1
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
• updates,
Print
Press the Page Down key to see more text.
I have read and accept the license terms.
< Back
Install >
Cancel

15. Click **Yes** to accept the Microsoft license agreement. The TEMS CellPlanner installation completes.
16. Users with a USB dongle locked license must have a special driver installed to read the dongle. For simplicity the driver is installed for everyone. If the driver is already installed from a previous TEMS CellPlanner version, the installation proceeds at Step 17.

a. If no USB dongle driver is installed, the driver installation starts as follows:



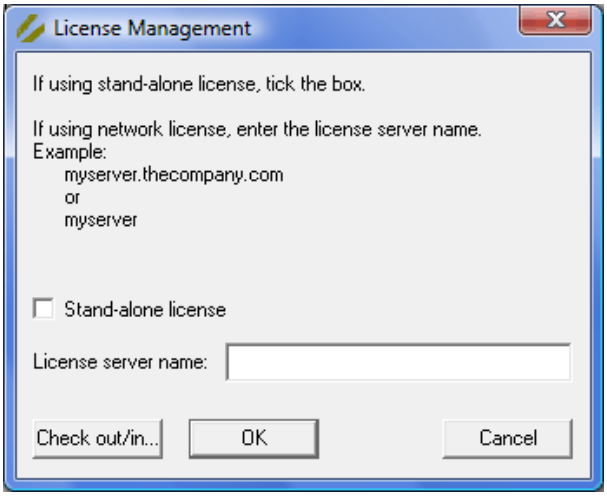
b. If a dongle with USB dongle locked license is inserted, ***remove*** it now.

c. Click **Next**. A completion window appears when the driver is installed:

d. If you have a dongle with USB dongle locked license, ***re-insert*** it now.

e. Click **Next**. A script is run to update the license lock file.

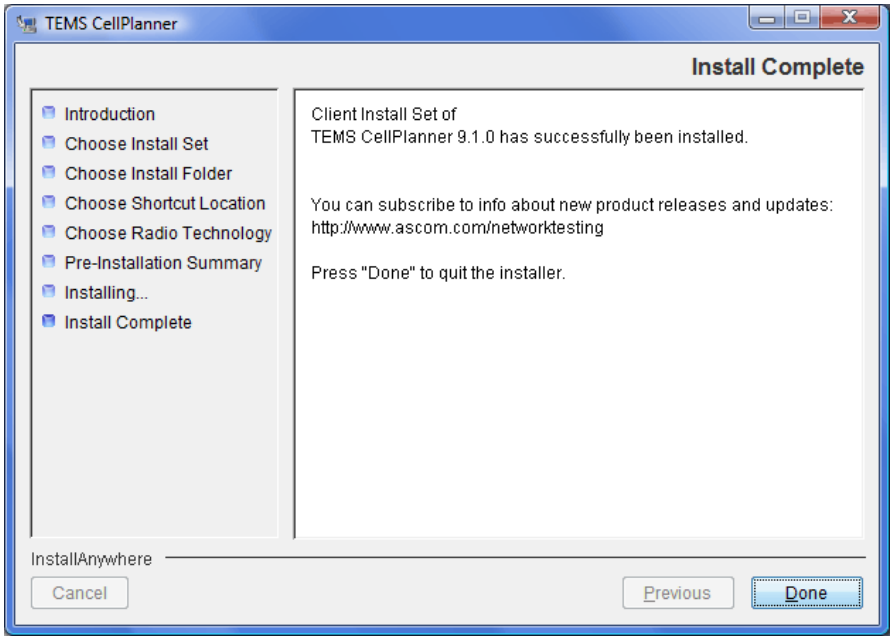
17. The **License Management** window appears:



18. Select license type:
    - To use Stand-alone licenses *s*elect option **stand-alone license**
    - To use Network licenses, enter the **license server name**

    Note: *For network licenses: If you do not know the name or IP address of the license server, leave the license server name empty and proceed with the installation. You can enter this information later, see chapter "Select Use of Network Licenses" in the TEMS CellPlanner Common Features User's Guide.*

19. Click **OK**. The **Install Complete** window is displayed:



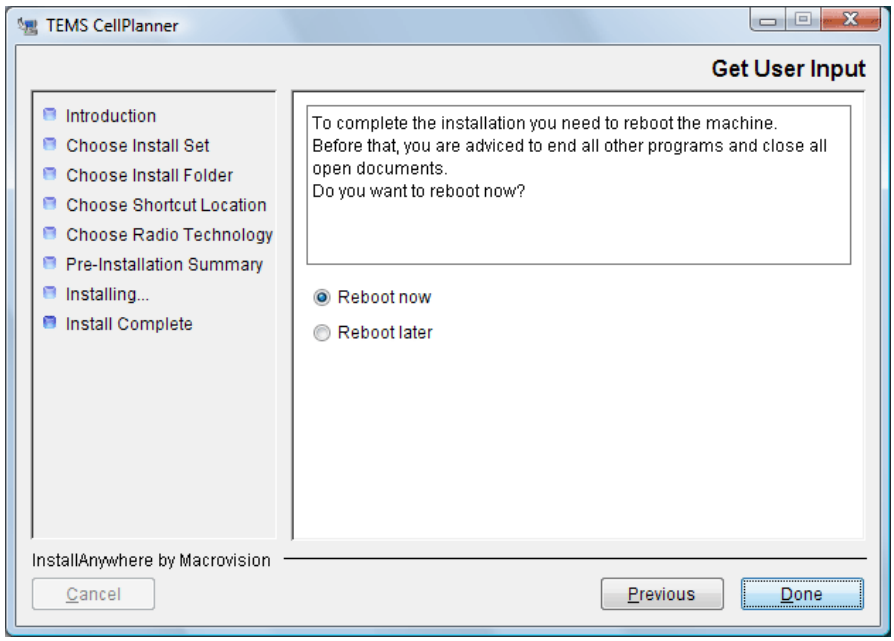
20. If you have selected to use a stand-alone license and the message "Existing license file used" does not appear in this window, you ***need a new license file*** after the installation, see Install the Stand-Alone License File on page 5-12.

    Any other installation problem is displayed in this window. Take action if needed, or proceed if no problem is indicated.

21. Click **Done** to complete the installation.

After TEMS CellPlanner Installation

- You might be prompted about rebooting your computer. Select to reboot now or later (before starting the TEMS CellPlanner Client). Close all applications before rebooting.



- If you have selected to use a stand-alone license, you must Install the Stand-Alone License File.
- If you are upgrading and have exported project files, complete the migration by Import Project Files (at Upgrade).
- Optional: After installation of the TEMS CellPlanner Client you can change the amount of RAM reserved. See RAM Distribution in a TEMS CellPlanner Client Computer on page 8-5 about how to change the memory reservation.

5.5 Install the Stand-Alone License File

(Skip this procedure if you will use network licenses on a license server).

If you have selected use of stand-alone license, you must install the stand-alone license file to be able to use the installed TEMS CellPlanner Client.

Follow the instructions from Acquire License File on page 6-6 and onwards.

5.6 Import Project Files (at Upgrade)

(Skip this procedure if you will not migrate old projects to this version).

After Install TEMS CellPlanner Client (and Install the Stand-Alone License File if you use a stand-alone license), you shall now complete an initiated migration. The projects you have exported can now be migrated back into project files. Follow the instructions from **Import XML files** in Migrate Project Files to TEMS CellPlanner 9.1.

5.7 Cancel Installation

You can cancel the installation at any time.

1. Click **Cancel** and the Cancel Installation window appears as shown in the following example:

Cancel Installation
Installation Not Complete
If you cancel the installation now, TEMS CellPlanner 9.1.0 will not be installed. To continue with the installation, click 'Resume'. To cancel the installation, click 'Quit'.
Quit
Resume

2. Select **Resume** to proceed with the installation.
3. Select **Quit** to stop the installation.

5.8 Install Microsoft .NET Framework 3.5 (Optional)

Microsoft .NET Framework of version 3.5 must be installed on your computer to allow import of measurement files (.log files) created by TEMS Investigation 10.x, TEMS Pocket 7.x or TEMS Automatic 7.x.

For your convenience this version of .NET Framework is available on the TEMS CellPlanner DVD, or can be downloaded from the same site as the TEMS CellPlanner software.

(An older version of .NET Framework is enough to import log files from older versions of the above TEMS tools. Most computers already have an old .NET Framework version installed).

Prerequisites

- You must have administrator privileges on the computer
- Adobe Reader is installed
- Reserve at least 30 minutes for the installation

Procedure

Do as follows to install Microsoft .NET Framework 3.5:

1. Start the installation according to how the software is packaged.

Downloaded:	Double-click on the downloaded `dotnetfx35_SP1.exe`.
On DVD:	Place the TEMS CellPlanner DVD in the DVD drive, open the DVD network drive in the explorer and double-click on `D:\Util\dotnetfx35_SP1.exe`

2. Follow the instructions in the installation wizard.
3. After completed installation you have to reboot the computer.

6
Installing Licenses

This chapter describes how to acquire, load and back up TEMS CellPlanner licenses.

The information in this chapter is intended only for the following categories:

- "normal" users that will use TEMS CellPlanner stand-alone, without connection to a license server
- administrators of Enterprise Server or Zero Admin Server where stand-alone licenses will be used
- administrators of License Server, responsible for installing network licenses

This chapter is irrelevant if you are a "normal" (non-administrative) TEMS CellPlanner user and will use network licenses.

Topics **Page**

About Installing TEMS CellPlanner Licenses 6-2
License Lock Type 6-2
License Type 6-2
Installing Stand-Alone Licenses for TEMS CellPlanner 6-3
How to Install Licenses - Step by Step 6-3
Inspect Lock File 6-5
Update Lock File 6-5
Acquire License File 6-6
Load License File 6-6
Back Up License File 6-7
Installing Stand-Alone Licenses for Enterprise Server 6-9
Installing Stand-Alone Licenses for Zero Admin Server 6-9
Installing Network Licenses on the License Server 6-9
How to Move a License File 6-10

6.1 About Installing TEMS CellPlanner Licenses

You TEMS CellPlanner software is packaged for a certain License Lock Type, and you will after installation select which License Type to type.

6.1.1 License Lock Type

Your installation kit is packaged for the license lock type you have ordered. There are two license lock types, USB dongle locked or PC locked.

USB dongle locked

A USB dongle locked license requires license information stored in a USB dongle, see Figure 2–1 on page 2-1.

A **USB dongle locked license is recommended** as you can easily reuse it. The USB dongle locked license depends on the dongle id only and can be moved between computers and reused after reinstalling the operating system. This is the most common license lock type.

PC locked

A PC locked license requires a file bound to the computer and operating system where it is installed. It cannot be moved to another computer or reused if the operating system is reinstalled.This license lock type is mainly used for temporary trial installations. PC locked licenses may also be ordered for TEMS CellPlanner servers where administrators do not want to depend on keeping an external dongle device connected, knowing that a dongle is easily removed by accident and then causing all client users to temporarily lose access to the servers.

6.1.2 License Type

After installation of TEMS CellPlanner you select the license type to use, either of Stand-alone licenses or Network licenses. Refer to chapter *Licenses* in the *TEMS CellPlanner Common Features User's Guide* for information on how to manage the licenses once they are installed.

Stand-alone licenses

Stand-alone licenses are installed locally on a TEMS CellPlanner computer and can be used by one user at a time.

Network licenses

Network licenses are installed on a license server and are available to the TEMS CellPlanner users that have selected to use network licenses on this license server.

6.2 Installing Stand-Alone Licenses for TEMS CellPlanner

To use Stand-alone licenses the license files must be installed on the same computer as the TEMS CellPlanner software.

Skip the rest of this section if you instead will use TEMS CellPlanner with network licenses installed on a license server.

Follow the instructions in this section to acquire and install stand-alone license files.

6.2.1 When to Install New Licenses

A new license file must be acquired and installed if you have...

- ...installed TEMS CellPlanner for the first time, or
- ...upgraded TEMS CellPlanner to a new full version, for example from 8.1 or 9.0 to 9.1

An already installed license file may be reused in some cases, but you must install a new license file if you will do any of the following:

a. Add licenses of Radio Technology Features or Planning Features, or

b. Switch from USB dongle locked license to PC locked license, or vice versa, or

c. Use a new USB dongle device for your USB dongle locked license

Contact TEMS Support for assistance in cases a and b.

6.2.2 How to Install Licenses - Step by Step

Do as follows to prepare for, acquire, and install license files:

❶ Install TEMS CellPlanner, see Install TEMS CellPlanner Client on page 5-3

❷ Inspect Lock File

❸ If the lock file is invalid, Update Lock File

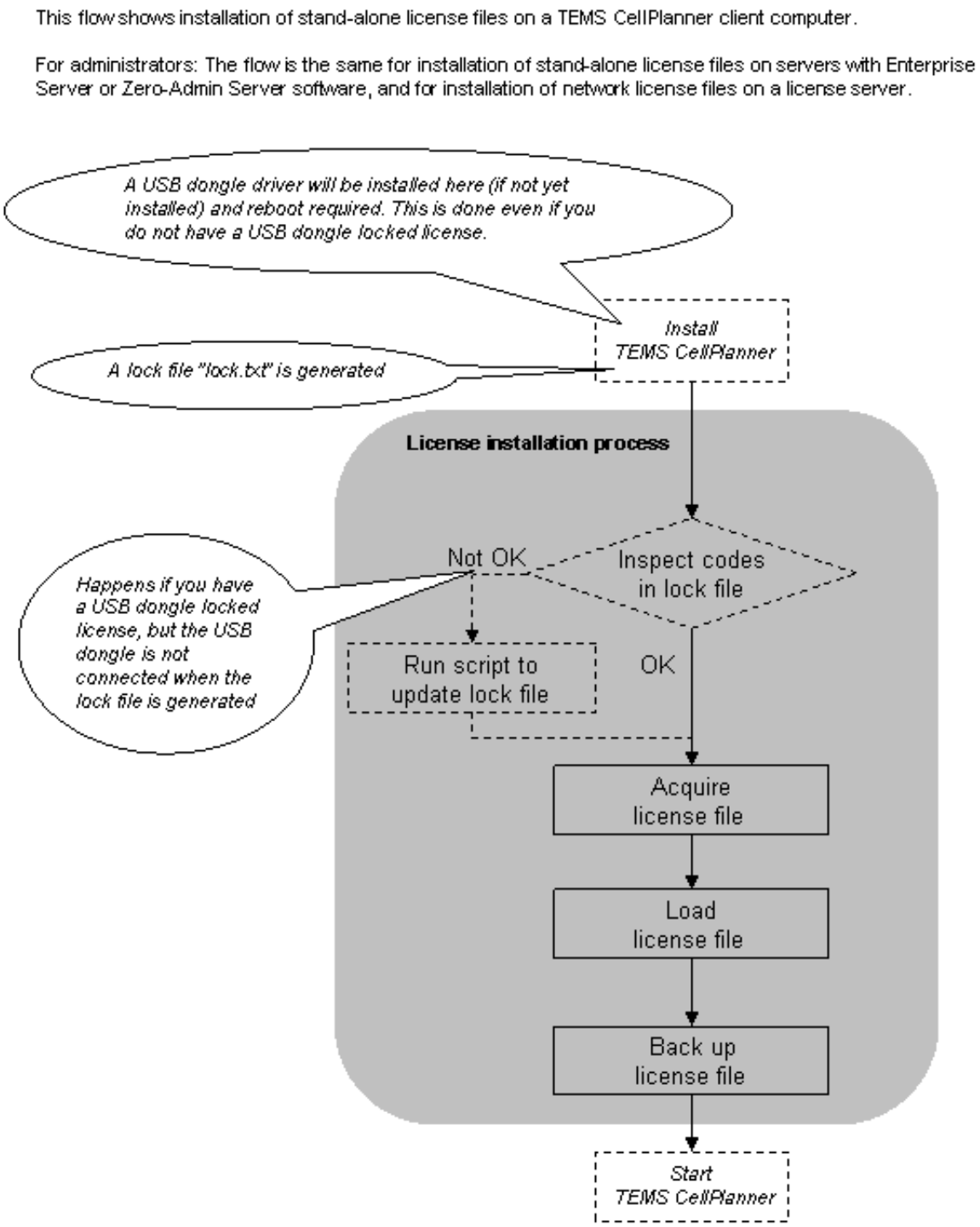
❹ Acquire License File

❺ Load License File

❻ Back Up License File

See also a graphical view of the license installation process on the next page.

Figure 6–1 License installation process


This flow shows installation of stand-alone license files on a TEMS CellPlanner client computer.
For administrators: The flow is the same for installation of stand-alone license files on servers with Enterprise Server or Zero-Admin Server software, and for installation of network license files on a license server.
A USB dongle driver will be installed here (if not yet installed) and reboot required. This is done even if you do not have a USB dongle locked license.
Install TEMS CellPlanner
A lock file "lock.txt" is generated
License installation process
Not OK
Inspect codes in lock file
Happens if you have a USB dongle locked license, but the USB dongle is not connected when the lock file is generated
Run script to update lock file
OK
Acquire license file
Load license file
Back up license file
Start TEMS CellPlanner

6.2.3 Inspect Lock File

A *lock file* named `lock.txt` is created during installation, irrespective if you use USB dongle locked or PC locked licenses. The lock file contains a *code* needed to acquire a *license file*, which in its turn is required to enable use of licensed software modules.

After installing TEMS CellPlanner, you need to inspect the lock file to ensure that the code is valid. This code consists of two parts separated by a hyphen, for example 80-1234 or 1C-5432. **If the value to the right of the hyphen is 0, for example 80-0 or 1C-0, the code is invalid and you must Update Lock File by running a script**.

The most common reason for having an invalid code is that you have a USB dongle locked license, but the USB dongle was not connected during the stage in the installation when the lock file was created. The license key must be read from the dongle to create a valid code in the lock file.

Location of lock.txt, lock.exe and License File

The lock file `lock.txt`, the script `lock.exe`, and the acquired license file, are all located as described in the following table:

Application	Path
TEMS CellPlanner Enterprise Server Zero-Admin Server	`C:\<Program Files>\Ascom\TEMS Products\TEMS CellPlanner v.x.x\Bin`
License Server	The default installation folder of the Sentinel Service, e.g. `C:\<Program Files>\Ascom\Sentinel Service`

Proceed with Acquire License File.

6.2.4 Update Lock File

If the lock file is erroneous you must manually update it by running a script. See Inspect Lock File on page 6-5 how to detect if the file is erroneous.

Prerequisites

- You must have administrator privileges on the computer.
- TEMS CellPlanner is installed.
- A `lock.txt` is available, see Inspect Lock File on page 6-5.

Procedure

1. Connect the dongle to a USB port.
2. Double-click on `lock.exe` in the same folder as `lock.txt`.
3. Verify that `lock.txt` is updated with valid contents.

6.2.5 Acquire License File

You need a new license file if you do not have a valid license file, see When to Install New Licenses on page 6-3.

Prerequisites

- TEMS CellPlanner is installed.
- A valid `lock.txt` is available, see Inspect Lock File on page 6-5.

Process

To acquire a license file, do as follows:

1. Send the information below to your TEMS Support contact:
   - `lock.txt` file
   - product serial number (on the backside of the DVD cover or on the TEMS CellPlanner box) or order number
   - company name
   - country
   - contact person
2. TEMS Support sends you a license file named `<date>.txt`.
3. Save the license file in the same folder as the `lock.txt` file, see Location of lock.txt, lock.exe and License File on page 6-5.

Proceed with Load License File.

6.2.6 Load License File

Use this procedure to load an acquired license file as a *stand-alone license* file on a TEMS CellPlanner Client, Enterprise Server or Zero-Admin Server, or as a *network license* file on a License Server.

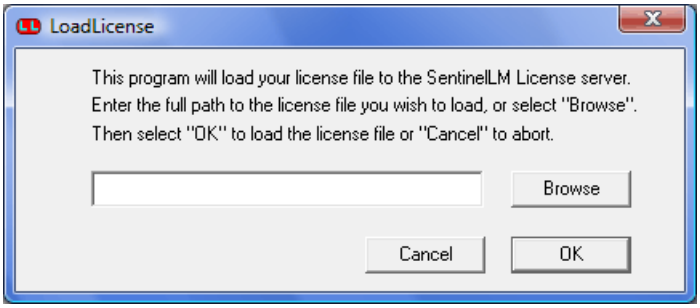
Prerequisites

- TEMS CellPlanner is installed on the PC where the license file shall be loaded.
- The lock file is correctly updated for the current TEMS CellPlanner version, see Inspect Lock File on page 6-5.
- A license file is available, see Acquire License File on page 6-6.

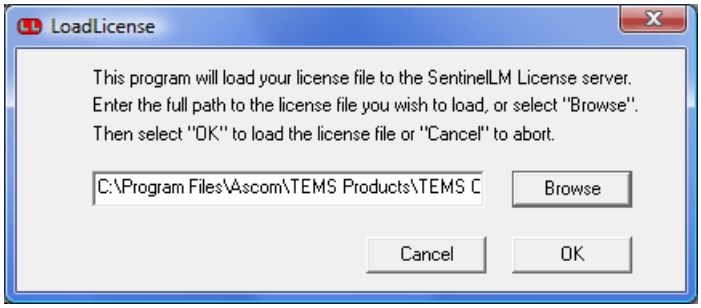
Procedure

Follow these steps to load the license file:

1. Double-click `LoadLicense.exe`, see Location of lock.txt, lock.exe and License File on page 6-5. The **Load License** window appears, as in this example:


LoadLicense
This program will load your license file to the SentinelLM License server.
Enter the full path to the license file you wish to load, or select "Browse".
Then select "OK" to load the license file or "Cancel" to abort.
Browse
Cancel
OK

2. Click **Browse**, select the license file, example `20091015.txt` and click **OK**. The full path to the license file is now displayed in the **Load License** window, as shown in the following example:


LoadLicense
This program will load your license file to the SentinelLM License server.
Enter the full path to the license file you wish to load, or select "Browse".
Then select "OK" to load the license file or "Cancel" to abort.
C:\Program Files\Ascom\TEMS Products\TEMS C
Browse
Cancel
OK

3. Click **OK**. The Sentinel Service `lslic.exe` window is displayed. Press **Enter** to continue.

Proceed with Back Up License File.

6.2.7 Back Up License File

Use this procedure to back up a USB dongle locked license file loaded on the computer where you have installed the TEMS CellPlanner application.

TEMS CellPlanner needs the license file and the USB dongle to enable use of the licensed software modules. Backing up the license file makes it easy to load the license again after re-installation of the operating system or a computer crash.

Procedure

1. Copy the license file and save it on another computer or device.

   Important: Save the license file in a secure place as a backup.

2. To prevent from mixing up license files and dongles, mark the USB dongle with the lock code in the lock file `lock.txt`. One license file corresponds to one USB dongle.
3. Change the name of the license file to include the code in the lock file, so you can easily recognize it.

6.3 Installing Stand-Alone Licenses for Enterprise Server

This procedure is intended for TEMS CellPlanner administrators only.

To use Stand-alone licenses on the Enterprise Server, you must install license files on the same computer as the Enterprise Server software. Follow Installing Stand-Alone Licenses for TEMS CellPlanner on page 6-3. Those instructions are written for TEMS CellPlanner clients, but are valid also for the Enterprise Server, just replace "TEMS CellPlanner" with "Enterprise Server" while reading.

If you instead will use Network licenses for the Enterprise Server, you do not need to install any licenses locally on the Enterprise Server computer.

6.4 Installing Stand-Alone Licenses for Zero Admin Server

This procedure is intended for TEMS CellPlanner administrators only.

To use Stand-alone licenses on the Zero Admin Server, you must install license files on the same computer as the Zero Admin Server software. Follow Installing Stand-Alone Licenses for TEMS CellPlanner on page 6-3. Those instructions are written for TEMS CellPlanner clients, but are valid also for the Zero Admin Server, just replace "TEMS CellPlanner" with "Zero Admin Server" while reading.

If you instead will use Network licenses for the Zero Admin Server, you do not need to install any licenses locally on the Zero Admin Server computer.

6.5 Installing Network Licenses on the License Server

This procedure is intended only for administrators responsible for installing network licenses on a license server, that is, a computer where the License Server software is installed.

TEMS CellPlanner users that will use network licenses configure the IP address or the name of the license server, see Step 18 in Install TEMS CellPlanner Client. When they start the application, licenses will be searched for on the addressed license server.

To provide the users with licenses you must install the license files locally on the computer where the license server software is installed.

Follow Installing Stand-Alone Licenses for TEMS CellPlanner on page 6-3. Those instructions are written for TEMS CellPlanner Clients, but are valid also for the License Server, just replace "TEMS CellPlanner" with "License Server", and "stand-alone license" with "network license" while reading.

6.6 How to Move a License File

You may move a USB dongle locked stand-alone license file to another computer.

1. Move the USB dongle to the new computer.
2. Install TEMS CellPlanner Client on the new computer, following instructions about inserting or removing the USB dongle.
3. Copy the license file into the license file folder on the new computer, see Location of lock.txt, lock.exe and License File on page 6-5.
4. Load License File.

7
Migrating to New Versions

This chapter describes how to migrate projects at upgrade. The same migration procedures are also used to move projects to another computer.

From TEMS CellPlanner 8.0 account information - project users, user groups and permissions - can be migrated together with projects stored in database.

Follow the instructions in this chapter carefully to not lose your data at upgrade to a new version of TEMS CellPlanner.

Topics **Page**

About Migration of Projects 7-2
- Project Migration Required at Upgrade of TEMS CellPlanner 7-2
- Project Migration Required at Upgrade of Oracle 7-2
- Migration of Project Users, Groups and Permissions 7-2
- Calculation Results Lost at Migration 7-3

Supported Migration Paths 7-3

Migrate Project Files to TEMS CellPlanner 9.1 7-4
- Process: How to Migrate Project Files 7-4
- Preparations 7-4
- Migrate Project Files, Part I: Export Projects 7-4
- Migrate Project Files, Part II: Upgrade TEMS CellPlanner Client 7-5
- Migrate Project Files, Part III: Import Projects 7-5

Migrate Database (DB) to TEMS CellPlanner 9.1 7-6
- Replace Enterprise Server with Zero Admin Server? 7-6
- Process: How to Migrate Projects in Database (DB) 7-6
- Preparations 7-7
- Migrate DB, Part I: Publish and Backup 7-7
- Migrate DB, Part IIa: Export Projects from 6.x.y/7.x.y 7-8
- Migrate DB, Part IIb: Export Projects (and Accounts) from 8.x.y or 9.x.y . . . 7-8
- Migrate DB, Part III: Upgrade TEMS CellPlanner Components 7-9
- Migrate DB, Part IV: Import Projects (and Accounts) 7-9

Post-Checks after Migration 7-10

7.1 About Migration of Projects

Migration is the process of saving existing TEMS CellPlanner data by export to an XML file, and restoring the data in a new TEMS CellPlanner environment by reading the XML file.

7.1.1 Project Migration Required at Upgrade of TEMS CellPlanner

Migration is required to reuse projects in a new TEMS CellPlanner version, for example at upgrade, or to move projects to another computer using another TEMS CellPlanner version.

Before upgrading to a new version of TEMS CellPlanner, you must migrate projects. You will otherwise lose your project data.

Project files and projects stored in database can only be read by the same TEMS CellPlanner software version that created the projects. At upgrade you will no longer have access to your old projects if you do not first export them to restore them after the upgrade. If you forget to export the projects before an upgrade, you will have to reinstall the old TEMS CellPlanner version.

7.1.2 Project Migration Required at Upgrade of Oracle

At upgrade to a new Oracle version in the database server you must also export the projects before the upgrade. The instructions show that you shall create a new tablespace for the new TEMS CellPlanner version, and import the exported projects into that tablespace. If you do not export the projects before upgrading Oracle, you have to reinstall the previous Oracle version to regain your projects. Even worse, if you have not created a new tablespace for the new TEMS CellPlanner version, and also forgot to export the projects, the only way to regain the projects is a rollback of project data from an Oracle backup. Reusing old tablespaces shall thus be avoided.

7.1.3 Migration of Project Users, Groups and Permissions

Each project stored on a server is associated with account information - project users, user groups and permissions - in the TEMS CellPlanner Enterprise Server or Zero Admin Server.

When exporting or importing projects in database from a TEMS CellPlanner Client, none of this account information is included. You have to record the account information before upgrade, and recreate the users, setup permissions and so on after importing the project.

From TEMS CellPlanner version 8.0 you can migrate the account information together with the projects stored in database. In this case you do not need to manually recreate users and setup permissions after the migration. You login to the

TEMS CellPlanner Server of version 8.0.x or 8.1.x, or the TEMS CellPlanner Enterprise Server or Zero Admin Server of version 9.0.x or later, and export the projects stored in database and the account information from the Server. When you import the projects exported from a TEMS CellPlanner Server of version 8.0.x or later, the account information in the XML files are included in the import.

Read more on this topic in *TEMS CellPlanner Common Features User's Guide*, chapter *Administering Database Users and Projects*.

7.1.4 Calculation Results Lost at Migration

A migrated project has an identical network configuration as the original exported project, but network objects get new identities when imported into another version of TEMS CellPlanner.

As the calculation results are bound to object identities, the calculation results for the original project are no longer valid after migration of the project.

7.2 Supported Migration Paths

You can migrate projects from the following TEMS CellPlanner versions to TEMS CellPlanner 9.1.y ("x" and "y" here stands for any number):

- TEMS CellPlanner 9.1.x
- TEMS CellPlanner 9.0.x
- TEMS CellPlanner 8.x.y.
- TEMS CellPlanner 7.x.y.
- TEMS CellPlanner Universal 6.x.y.

Important: Contact TEMS Support for help with migrating from TEMS CellPlanner 5.x, or before uninstalling TEMS CellPlanner 5.x.
See Support Information on page 3-1.

7.3 Migrate Project Files to TEMS CellPlanner 9.1

This chapter describes how to migrate project files to a new TEMS CellPlanner version. If your projects are stored in a database and not as project files, follow instead the instructions in chapter Migrate Database (DB) to TEMS CellPlanner 9.1.

Caution: You must migrate projects to not lose your data at upgrade to new version of TEMS CellPlanner software.

See the *TEMS CellPlanner Common Features User's Guide* for detailed procedures on importing and exporting data.

7.3.1 Process: How to Migrate Project Files

A complete migration includes export of projects to XML files, installation of new version, import of the XML files and re-creation of projects.

Follow this process to migrate your project files to TEMS CellPlanner 9.1:

1. Preparations.
2. Migrate Project Files, Part I: Export Projects.
3. Migrate Project Files, Part II: Upgrade TEMS CellPlanner Client.
4. Migrate Project Files, Part III: Import Projects.
5. Post-Checks after Migration.

7.3.2 Preparations

1. Read About Migration of Projects on page 7-2.
2. Reserve time for the migration. The time to migrate the projects may vary depending on the size of the projects and limitations in RAM, CPU, disk, network and so on.
3. Ensure that your client application has a large amount of RAM reserved. It may otherwise take hours to export to XML files, and import of XML files might fail due to lack of memory. See Hardware Recommendations on page 4-2 about RAM needs, and Changing RAM Distribution on a Computer Hosting TEMS CellPlanner Client Only on page 8-6 how to tune the memory.

7.3.3 Migrate Project Files, Part I: Export Projects

Do as follows to export project files:

1. Start the TEMS CellPlanner Client.

For **each** TEMS CellPlanner project to migrate:

2. Open the project file.
3. Perform a project consistency check.
4. Export the project as an XML file by selecting the appropriate menu choice:
   - From TEMS CellPlanner 7.x.y or later: Use **File↗Export↗TCP XML**
   - From TEMS CellPlanner Universal 6.x.y: Use **File↗Export↗TCPU XML**
5. Select a temporary directory, type a file name (project name) and click **Export**.
6. Repeat Step 2 to Step 5 until all project files have been exported to XML.

Proceed with Migrate Project Files, Part II: Upgrade TEMS CellPlanner Client.

7.3.4 Migrate Project Files, Part II: Upgrade TEMS CellPlanner Client

After exporting all projects, upgrade as follows:

7. Install the new version of the TEMS CellPlanner Client according to instructions in Installing TEMS CellPlanner on page 5-1.
8. If you use a stand-alone license:
   - At upgrade from TEMS CellPlanner 8.x.y, 7.x.y, or 6.x.y to 9.x.y, you must acquire and load a new license valid for TEMS CellPlanner 9.x.y. See Acquire License File on page 6-6.
   - At upgrade from 9.x.y to 9.z.w, you do not need a new license file. The old license file is automatically copied into the `Bin` folder of the new TEMS CellPlanner version, and you can start the TEMS CellPlanner Client immediately after upgrade.

Proceed with Migrate Project Files, Part III: Import Projects

7.3.5 Migrate Project Files, Part III: Import Projects

After installing TEMS CellPlanner 9.1 you can restore your projects by importing the XML files and save them as project files again.

For **each** TEMS CellPlanner XML file to import:

9. Import project from previous version. Select **File↗Import↗TCP XML.** The dialog window shows the supported TCP versions for XML import.
10. Find your previously exported file, select it and click **Open**. TEMS CellPlanner loads the old XML file and opens it as a TEMS CellPlanner 9.1 project.
11. Select **File↗Save As** to save your project as a project file again**.**
12. Repeat Step 9 to Step 11 to restore all projects in TEMS CellPlanner 9.1.

Proceed with Post-Checks after Migration.

7.4 Migrate Database (DB) to TEMS CellPlanner 9.1

This chapter describes how to migrate projects stored in a database to a new TEMS CellPlanner version. If your projects are stored as project files and not in database, follow instead the instructions in chapter Migrate Project Files to TEMS CellPlanner 9.1.

Caution: *You must migrate projects to not lose your data at upgrade to new version of TEMS CellPlanner software.*

The projects are migrated by exporting projects in the database from the old software version, and importing the projects to the new software version, thus creating the projects in the new database.

7.4.1 Replace Enterprise Server with Zero Admin Server?

"Enterprise Server" is from 9.0 the new name of the TEMS CellPlanner Server interconnecting a TEMS CellPlanner Client with an Oracle database. From this version we have also introduced a new, cheaper server type, the Zero Admin Server, which instead of requiring an Oracle database has an in-built database and can be installed on any computer meeting the System Requirements.

If you currently have your projects stored in an Oracle database, you access them via the Enterprise Server. If you though prefer the simpler Zero Admin Server database solution you may export your projects and accounts from the Enterprise Server, and import them into the Zero Admin Server instead. After that, you will no longer need the Oracle database for storing TEMS CellPlanner projects.

Important: Using an Oracle database or not might be an organizational issue. Ensure you use the server type preferred by your organization.

7.4.2 Process: How to Migrate Projects in Database (DB)

A complete migration includes export of projects (and accounts) to XML files, installation of new version, import of the XML files (and accounts) and re-creation of projects.

Follow the steps below in the mentioned order to migrate projects stored in database when you upgrade to a new version of TEMS CellPlanner.

1. Preparations
2. Migrate DB, Part I: Publish and Backup

3. Migrate DB, Part IIa: Export Projects from 6.x.y/7.x.y
4. Migrate DB, Part IIb: Export Projects (and Accounts) from 8.x.y or 9.x.y
5. Migrate DB, Part III: Upgrade TEMS CellPlanner Components
6. Migrate DB, Part IV: Import Projects (and Accounts)
7. Post-Checks after Migration

7.4.3 Preparations

- Read About Migration of Projects on page 7-2.
- If your current TEMS CellPlanner installation is of version 7.x.y or older, the projects must be exported from a TEMS CellPlanner Client, as follows:
  - Select one administrative user to migrate the projects
  - Select one TEMS CellPlanner Client to migrate the projects.
  - Ensure that the TEMS CellPlanner Client and Server software are compatible, that is, of the same version. The TEMS CellPlanner Client accesses projects in the database via the TEMS CellPlanner Server. If they are of different versions, the internal data structures of the projects will not match and access to the projects will fail.
  - Ensure that the TEMS CellPlanner Client has a large amount of RAM reserved, it may otherwise take hours to export projects and import of projects may fail due to lack of memory. Read about memory needs and how to tune the TEMS CellPlanner Client in Hardware Recommendations on page 4-2 and Changing RAM Distribution in a Server Computer on page 8-5.
  - Record all TEMS CellPlanner database users, user groups and project and site permissions for the projects to migrate. You have to re-enter this information after the upgrade. Read how to view users, user groups and project and site permissions in *TEMS CellPlanner Common Features User's Guide*, chapter *Administering Database Users and Projects*.
- Ensure that you are defined as an Oracle user in the TEMS CellPlanner part of the Oracle database.
- Reserve time for the migration. The time to migrate the projects may vary depending on the size of the projects and limitations in RAM, CPU, disk, network and so on.

7.4.4 Migrate DB, Part I: Publish and Backup

1. Ensure all users publish their workspace changes.
2. Inform all users not to access projects in the database until the migration is completed.
3. Back up your TEMS CellPlanner database:

- Enterprise Server instructions: See the *Oracle manuals*
- Zero Admin Server instructions: See Backups in Zero Admin Server on page 12-2.

Proceed with Migrate DB, Part IIa: Export Projects from 6.x.y/7.x.y or Migrate DB, Part IIb: Export Projects (and Accounts) from 8.x.y or 9.x.y.

7.4.5 Migrate DB, Part IIa: Export Projects from 6.x.y/7.x.y

If your current TEMS CellPlanner installation is of version **7.x.y or older**, do as follows to export projects in database

4. Start the TEMS CellPlanner Client.

For **each** TEMS CellPlanner project to migrate:

5. Refresh the project to synchronize published changes.
6. Load the project from the database to the client. The filter shall include ***all*** sites to obtain high performance when the project is written to XML file.
7. Perform a project consistency check.
8. Export the project as an XML file by selecting the appropriate menu choice:
   - From TEMS CellPlanner Universal 6.x.y: Use **File↗Export↗TCPU XML**
   - From TEMS CellPlanner 7.x.y: Use **File↗Export↗TCP XML**
9. Select a temporary directory, type in a file name (project name) and click **Export**.
10. Repeat Step 5 to Step 9 until all projects have been exported to XML.
11. Recommended: Back up the XML files.

Proceed with Migrate DB, Part III: Upgrade TEMS CellPlanner Components.

7.4.6 Migrate DB, Part IIb: Export Projects (and Accounts) from 8.x.y or 9.x.y

If your current TEMS CellPlanner installation is of version **8.x.y** or **9.x.y**, follow Step 12 to Step 14 to migrate projects directly from the TEMS CellPlanner Server, not via the TEMS CellPlanner Client.

12. Login to the User Administration tool as an administrative user, see the *TEMS CellPlanner Common Features User's Guide*, chapter *Login to TEMS CellPlanner Server as Administrator.*
13. For **each** TEMS CellPlanner project to migrate, export the project according to instructions in the *TEMS CellPlanner Common Features User's Guide*, chapter *Export Projects in Database from TEMS CellPlanner Server*. The projects with their account information are exported.
14. Recommended: Back up the XML files.

Proceed with Migrate DB, Part III: Upgrade TEMS CellPlanner Components.

7.4.7 Migrate DB, Part III: Upgrade TEMS CellPlanner Components

After all projects have been exported, you may upgrade the TEMS CellPlanner components.

15. Optional: Upgrade Oracle software to version 11g. See Installing Oracle Software and Creating Database on page 10-1
16. Upgrade the TEMS CellPlanner Server (if older than 9.1) to version 9.1. Which software to upgrade depends on where migrated projects and accounts shall be stored:
    - in Oracle database, follow the instructions in Installing Enterprise Server on page 11-1, or
    - without using an Oracle database, follow instead the instructions in Installing Zero Admin Server on page 12-1

    Tip: Do you want to Replace Enterprise Server with Zero Admin Server? If yes, do it now by installing the Zero Admin Server software.
17. Upgrade the TEMS CellPlanner Client software to 9.1 on the computer to use for import of projects being migrated.

Proceed with Migrate DB, Part IV: Import Projects (and Accounts).

7.4.8 Migrate DB, Part IV: Import Projects (and Accounts)

After installing TEMS CellPlanner 9.1 you can restore your projects by importing the XML files and recreating the projects in the database.

18. Login to the User Administration tool as an administrative user, see the *TEMS CellPlanner Common Features User's Guide*, chapter *Login to TEMS CellPlanner Server as Administrator.*
19. For each TEMS CellPlanner project to migrate, import the project and save it in the database. See instructions in the *TEMS CellPlanner Common Features User's Guide*, chapter *Import Project XML Files to* TEMS CellPlanner *Server*.
20. If the imported files were exported from a TEMS CellPlanner installation of version 7.x.y or older, no account information was exported, and thus not included in the import. In this case you must recreate users, user groups and permissions of the restored projects from the recorded information in Preparations.

    Read how to create users, user groups and define project and site permissions in *TEMS CellPlanner Common Features User's Guide*, chapter *Administering Database Users and Projects.*

Proceed with Post-Checks after Migration.

7.5 Post-Checks after Migration

When you have migrated project files or projects in database, you need to check that the map data is successfully migrated, and re-calculate analysis results.

For **each** restored TEMS CellPlanner project:

1. Verify coordinate reference system

   If the coordinate reference system used for the exported project does not exist in the Coordinates.xml file, it is created during the import and added to the list of existing coordinate systems. The used coordinate system can be displayed by clicking **View** in the **Project settings** window.

2. Verify maps in project settings

   The preprocessed map data (MRR format) used for calculations is selected in the **Maps** tab of the **Project settings** window.

3. It is recommended to re-calculate analysis results, as previous results may be obsolete after upgrade to a new TEMS CellPlanner version. As analysis results are user specific, the re-calculations need to be performed by the users concerned.

8
Changing RAM and Optional Software Settings

This chapter describes how to change RAM reservation for TEMS CellPlanner applications, and how to modify optional software settings.

How to change the application preferences for radio technologies and other licensed features is described in the *TEMS CellPlanner Common Features User's Guide*.

Topics **Page**

Change Reservation of RAM 8-2
- About RAM Reservation 8-2
- Default RAM Reservation 8-3
- RAM Distribution in TEMS CellPlanner Server Computer 8-3
- RAM Distribution in a TEMS CellPlanner Client Computer. 8-5
- Procedure to Change RAM Reservation 8-7

Enable and Disable Optional Software 8-9

8.1 Change Reservation of RAM

Use this utility to calculate the needs of RAM memory and change the default memory reserved at installation.

Do not use this utility to reserve RAM memory for a TEMS CellPlanner Client in a Citrix environment. You shall then instead follow the instructions in Memory Reservation in Citrix Environment on page 17-3.

8.1.1 About RAM Reservation

The TEMS CellPlanner Client and Server applications - and the Oracle database if installed on the same computer as the TEMS CellPlanner Server - need a minimum amount of RAM. A default amount of RAM is reserved for the TEMS CellPlanner programs at installation time. You can change these settings depending on the needs of the Oracle database and the operating system, and the amount of RAM installed.

RAM distribution is particularly important if the Oracle database is co-located with the TEMS CellPlanner Server in the same computer as the Oracle database and the TEMS CellPlanner Server both need a high amount of RAM.

Increasing the reserved RAM of the TEMS CellPlanner programs improves the performance when planning large networks, but reduces the possibility of running other programs simultaneously.

It is hard to predict the amount of RAM needed for the TEMS CellPlanner programs, as the TEMS CellPlanner Server uses a cache to speed up calculations and lower response time for requests. When an object is read from the computer hosting the Server it is stored in a local cache, if there is memory available. The next query can reuse the object in the cache, and for a given number of concurrent users and objects (sites) in the project, adding memory to the cache does not improve performance because all objects are already in the cache.

The Oracle engine also uses a cache to reduce the reads from disk. If the Oracle engine has enough RAM reserved it can hold all information in RAM. Normally the database is too large and the Oracle engine can hold only a small portion in the RAM. If the RAM reserved for Oracle is minimal, the Oracle engine will always fetch the data from disk and show low performance.

8.1.2 Default RAM Reservation

The table below shows the default reserved memory at installation of the TEMS CellPlanner programs:

Computer	Default RAM reservation for TEMS CellPlanner programs
Computer hosting TEMS CellPlanner Client only	• 50% for the TEMS CellPlanner Client (named Client Application in Application Preferences) • 0% for the TEMS CellPlanner Server (named Db Server in Application Preferences)
Computer hosting TEMS CellPlanner Client and Server	• 30% for the TEMS CellPlanner Client (named Client Application in Application Preferences) • 35% for the Server (named Db Server in Application Preferences)

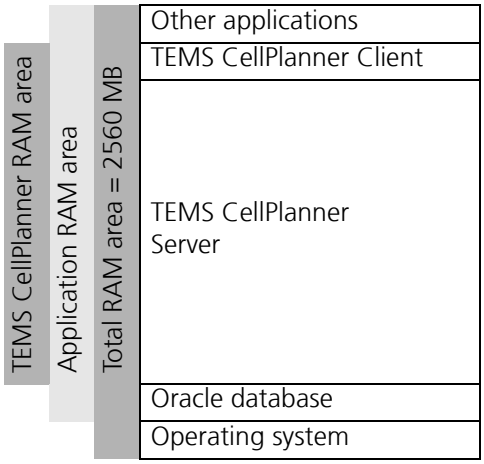
8.1.3 RAM Distribution in TEMS CellPlanner Server Computer

This section describes how to calculate and change the RAM distribution in a computer hosting a TEMS CellPlanner Server, that is and Enterprise Server or Zero Admin Server.

Calculating RAM Distribution of a Server Computer

The following figure shows an example of RAM distribution in a computer hosting the TEMS CellPlanner Server.

The calculation is shown below the figure. See Changing RAM Distribution in a Server Computer on page 8-5 how to modify the RAM reservation.



	Reserved by default (MB)	Reserved after tuning (MB)
Other applications	0	60
TEMS CellPlanner Client	768	420
TEMS CellPlanner Server	896	980
Oracle database	396	600
Operating system	500	500

1. Note the total amount of RAM installed, and the amount of RAM required by the operating system. See the operating system manual for more information on RAM requirements.

   In the example, the total amount of RAM is 2560 MB and the operating system requires 500 MB.

2. Calculate the RAM available for applications by subtracting the RAM needed by the operating system from the total RAM. The application RAM is shared between the TEMS CellPlanner programs, the Oracle database and possibly other applications.

   In the example, the application RAM = 2560 MB - 500 MB = 2060 MB

3. Calculate the RAM reserved for the TEMS CellPlanner programs using the default values, see Default RAM Reservation on page 8-3. The percentage is calculated *from the total RAM installed*.

   In the example the following figures apply:

   - The TEMS CellPlanner Server gets 35% of 2560 MB = 896 MB.
   - The TEMS CellPlanner Client gets 30% of 2560 MB = 768 MB.

   The TEMS CellPlanner programs get 896 MB + 768 MB + 0 MB = 1664 MB.

4. Calculate the amount of RAM available for the Oracle database by subtracting the RAM needed by the TEMS CellPlanner programs from the amount of RAM available for applications.

   In the example, the Oracle database gets 2060 MB - 1664 MB = 396 MB

5. Ensure that the RAM distribution is in the order 70% for the TEMS CellPlanner programs and 30% for the Oracle database. If the amount of RAM is low, reserve more RAM to the TEMS CellPlanner Server than to the Oracle database to obtain good performance.

   In the example, TEMS CellPlanner has 1664 MB / 2060 MB = 81% of the application RAM. This exceeds the needed 70% with 11%. 11% of the application RAM can thus be taken from TEMS CellPlanner and given to the Oracle database, which is described in the next steps.

6. Tune the Oracle database RAM.

   In the example, the Oracle database RAM can be increased by 11% of the application RAM. The tuned size of the Oracle database RAM = 396 MB + 11% of 2060 MB = 396 MB + 226 MB = 622 MB, rounded down to 600 MB.

7. Tune the TEMS CellPlanner RAM.

   In the example, the TEMS CellPlanner RAM can be decreased by 11% of the application RAM. The tuned size of the TEMS CellPlanner RAM = 1664 MB - 11% of 2060 MB = 1664 MB - 226 MB = 1438 MB, rounded down to 1400 MB.

8. Modify the TEMS CellPlanner RAM distribution, now as a *percentage of the* TEMS CellPlanner *RAM*. Reserve the major part for the TEMS CellPlanner

Server. If other applications shall run on the TEMS CellPlanner Server computer, reserve less RAM for TEMS CellPlanner.

In the example, the following figures apply:

- The TEMS CellPlanner Client gets 30% of 1400 MB = 420 MB
- The TEMS CellPlanner Server can get as most the rest of the TEMS CellPlanner RAM = 70% of 1400 MB = 980 MB.

Changing RAM Distribution in a Server Computer

Find the amount of RAM to reserve for the Oracle database and the TEMS CellPlanner programs as described by Calculating RAM Distribution of a Server Computer.

Limit the RAM reserved for the Oracle database from the Oracle Enterprise Manager console. See the Oracle manuals for more information.

Limit the RAM reserved for the TEMS CellPlanner programs according to the procedure on 8-7.

See the operating system manual for more information on RAM required by the operating system.

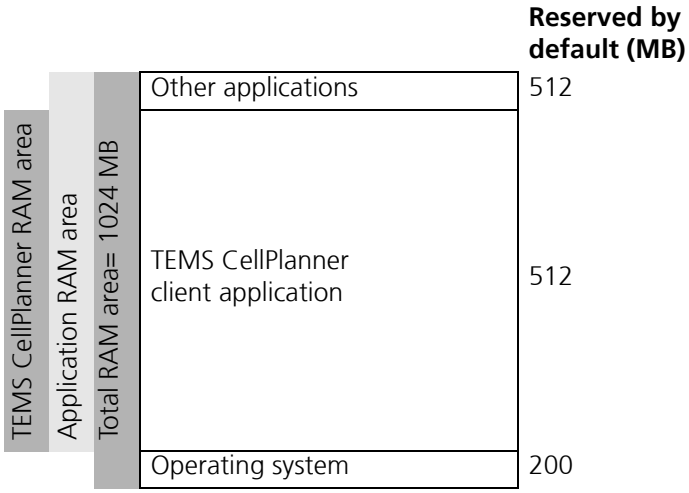
8.1.4 RAM Distribution in a TEMS CellPlanner Client Computer

This section describes how to calculate and change the RAM distribution in a computer where the TEMS CellPlanner Client only - not the TEMS CellPlanner Server - is installed.

Calculating RAM of a TEMS CellPlanner Client Computer

The following figure shows an example of RAM distribution in a computer with TEMS CellPlanner Client software.

The calculation is shown below the figure. See Changing RAM Distribution on a Computer Hosting TEMS CellPlanner Client Only on page 8-6 how to modify the RAM reservation.



1. Note the total amount of RAM installed and the amount of RAM required by the operating system. See the operating system manual for more information on RAM requirements.

   In the example, the total amount of RAM is 1024 MB and the operating system requires 200 MB.

2. Calculate the RAM available for applications by subtracting the RAM needed by the operating system from the total RAM. The application RAM shall be shared between the TEMS CellPlanner programs and possibly other applications.

   In the example, the application RAM = 1024 MB - 200 MB = 824 MB

3. Calculate the RAM reserved for the TEMS CellPlanner programs using the default values, see Default RAM Reservation on page 8-3. The percentage is calculated *from the total RAM installed*.

   In the example, the following figures apply:
   - The client application gets 50% of 1024 MB = 512 MB by default.
   - The Server gets 0 MB

4. Tune the client application RAM memory if needed.

Changing RAM Distribution on a Computer Hosting TEMS CellPlanner Client Only

Find the default amount of RAM reserved for the TEMS CellPlanner programs as described by Calculating RAM of a TEMS CellPlanner Client Computer.

You can change the default settings according to the procedure on 8-7, with the following restrictions:

- Do not reserve more than 60% of the total RAM to the client application.
- Do not exceed the total amount of RAM installed.

Hint

If the error message

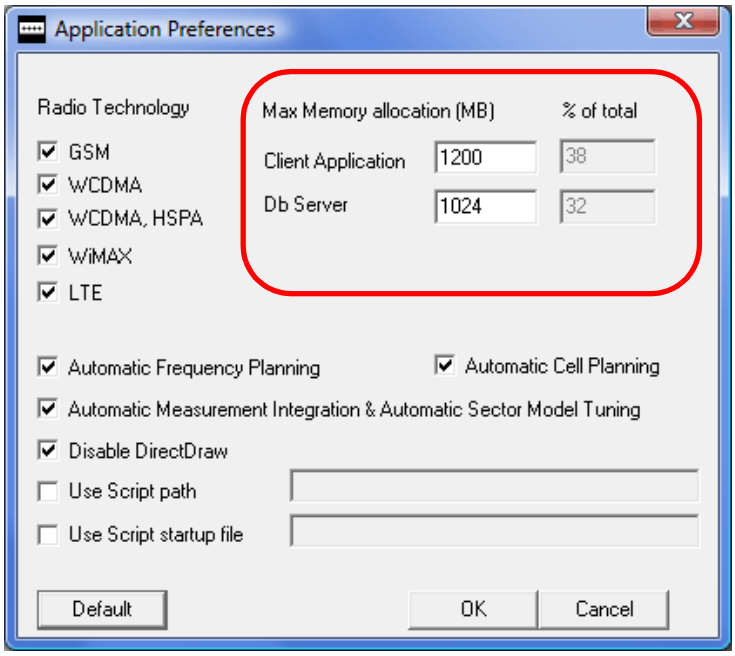
```
Can not initialize java heap
```

appears when you start a TEMS CellPlanner application, reduce the amount of reserved memory for the TEMS CellPlanner application that can not be launched.

8.1.5 Procedure to Change RAM Reservation

Follow these steps to change installation settings:

1. Select **Start↗Programs↗TEMS Products↗TEMS CellPlanner 9.x.x↗Utilities↗Application Preferences**. The Application Preferences window is displayed as in the following example:



2. Change the memory reservation as required.
3. Click OK to save the changes.

Fields on Window “Application Preferences”

The following fields are relevant for this procedure:

Max Memory Allocation	Maximum memory reserved to the TEMS CellPlanner programs • Client Application (the TEMS CellPlanner Client) • Db Server (the TEMS CellPlanner Server) This parameter limits how much RAM can be allocated in runtime. Default values are set at installation time, see Default RAM Reservation.
% of Total	Percentage of total available memory used by TEMS CellPlanner.
Default	Sets defaults for parameter settings.

8.2 Enable and Disable Optional Software

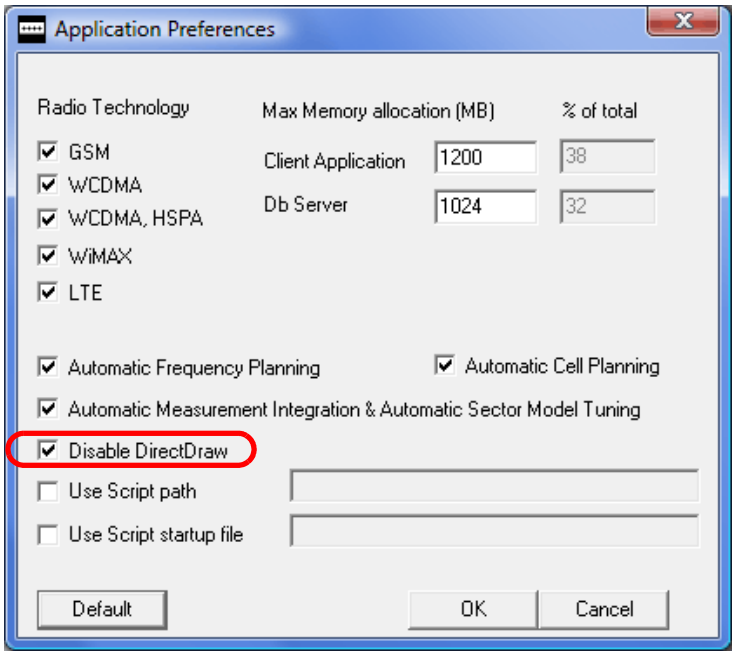
Use this utility to enable or disable optional software.

Zooming on a computer with DirectDraw is extremely slow in some computer environments. The option **Disable DirectDraw** is initially selected when installing the TEMS CellPlanner Client, as this graphics software does not perform well with TEMS CellPlanner.

Procedure

Follow these steps to enable or disable optional software:

1. Select **Start↗Programs↗TEMS Products↗TEMS CellPlanner 9.x.x↗Utilities↗Application Preferences**. The **Application Preferences** window is displayed as in the following example:



2. Enable or disable optional software as required.
3. Click **OK** to save the changes.

Fields on Window "Application Preferences"

The following fields are relevant for this procedure:

Disable DirectDraw	Disables DirectDraw for use with ATI Radeon graphic cards. Initially selected.
Default	Sets defaults for parameter settings.

9
Overview of TEMS CellPlanner Components

The software described in this chapter can be installed in a network used by radio network planners working alone or together on TEMS CellPlanner projects.

Topics **Page**

TEMS CellPlanner Overview 9-2
- TEMS CellPlanner for "Normal" Users 9-2
- TEMS CellPlanner for Server Administrators 9-2

Overview of the TEMS CellPlanner Client 9-3

TEMS CellPlanner Servers for Shared Projects 9-3
- Overview of the Zero Admin Server 9-4
- Overview of the Enterprise Server 9-4

Overview of the License Server 9-4

Overview of the User Administration Tool 9-5

9.1 TEMS CellPlanner Overview

Most readers of this manual only need to install and read about the application named TEMS CellPlanner in the installation wizard. In this manual we use the name TEMS CellPlanner **Client** to distinguish it from other components of the software package.

9.1.1 TEMS CellPlanner for "Normal" Users

If you are a "normal" planner with no administrative role you only need to read the following chapters:

- Overview of the TEMS CellPlanner Client on page 9-3
- Install TEMS CellPlanner Client on page 5-3

9.1.2 TEMS CellPlanner for Server Administrators

If you are administrator of any of the server components delivered in the TEMS CellPlanner package you should read the entire Overview of TEMS CellPlanner Components chapter.

The following TEMS CellPlanner components may be used together in a network:

- TEMS CellPlanner Clients
- TEMS CellPlanner Server, a common name for the following server variants:
  - Zero Admin Server, or
  - Enterprise Server installed together with an Oracle database
- TEMS CellPlanner User Administration Tool
- TEMS CellPlanner License Server

The TEMS CellPlanner Clients and the TEMS CellPlanner Server must be of the same TEMS CellPlanner version.

The TEMS CellPlanner components are described in the subsequent pages.

9.2 Overview of the TEMS CellPlanner Client

The TEMS CellPlanner Client is a an end-user application software including functionality to configure and analyze radio networks. In the installation and in instructions in the manual it is simply called "TEMS CellPlanner", as it is the main component of the TEMS CellPlanner package, and most users install this component only.

TEMS CellPlanner is installed on a client computer, and most users work stand-alone with licenses and projects stored on the same client computer.

TEMS CellPlanner in a Multi-User Environment

TEMS CellPlanner may get network licenses from a License Server somewhere else in the network.

TEMS CellPlanner users on the same network may share projects stored on an Enterprise Server with Oracle database, or on a Zero Admin Server with an embedded database.

The User Administration Tool may be installed on the same computer as a TEMS CellPlanner Client, for remote administration of an Enterprise Server or Zero Admin Server.

TEMS CellPlanner may be installed on a Citrix server and published as a Citrix application to users in the network, see TEMS CellPlanner in a Citrix Environment on page 17-1.

9.3 TEMS CellPlanner Servers for Shared Projects

You can store TEMS CellPlanner projects in a database on a server shared together with other planners. The server software manages the connections, data transfer and conflict resolution between TEMS CellPlanner and the database.

The version of the server must be of the same version as the TEMS CellPlanner clients in the network.

There are two types of servers to use together with TEMS CellPlanner:

- Zero Admin Server, see page 9-4
- Enterprise Server, see page 9-4

Which type of server your prefer depends on the level of maintenance you want to spend on your server, or the internal IT policy of your organization.

For more information, see chapter *Working with Projects on Server* in the *TEMS CellPlanner Common Features User's Guide*.

9.3.1 Overview of the Zero Admin Server

The Zero Admin Server software is intended to be installed on a low cost computer, for example a laptop. The software creates a proprietary database on the same computer, requiring a minimum of administration. It is suitable for smaller groups of planners (1-10 persons), small planning projects and short roll-out projects.

No Oracle database is needed, therefore it does not require administrators to have special competencies about managing databases.

Automatic backups are created by default, and manual backups may be initiated by the administrator.

Compared to the Enterprise Server, the Zero Admin Server provides simplified publish and refresh where the last publish "wins", simplified conflict handling (project locking), and simplified queue handling with one active operation at a time.

9.3.2 Overview of the Enterprise Server

The Enterprise Server software is installed together with an Oracle database, maintained by an Oracle administrator. It is suitable for large groups of planners (more than 10 persons), and large planning projects.

The Enterprise Server was called "TEMS CellPlanner Server" in earlier releases of the TEMS CellPlanner product family.

The Oracle software in installed in, and the Oracle database allocated in, a *database server* computer. A TEMS CellPlanner version specific *database instance* is created within the storage area of the Oracle database. For optimal performance, it is recommended to install the Enterprise Server software on the same computer as the Oracle database, but the solution allows you to install the Enterprise Server and Oracle on different computers.

Knowledge about configuring, maintaining and backing up Oracle databases is required for administrators responsible of the Oracle installation and database. The Oracle administrator must ensure that backups are taken from the Oracle database.

9.4 Overview of the License Server

The License Server is a software controlling and monitoring the *network licenses* shared by TEMS CellPlanner clients. An alternative to shared network licenses - and more common - are *stand-alone licenses*. If all TEMS CellPlanner clients in your network use stand-alone licenses, no License Server is needed.

The License Server is installed, together with license files, on a license server. It is recommended to use a dedicated license server with a high degree of accessibility. If the license server is not accessible from the network, licenses are unavailable and applications are terminated.

The License Server may be installed on the same computer as an Enterprise (or Zero Admin) Server (if applicable) or Oracle database (if applicable). It should not be installed in any TEMS CellPlanner client.

9.5 Overview of the User Administration Tool

The User Administration is a tool used by the TEMS CellPlanner administrator to do the following:

- Register and manage user accounts in the TEMS CellPlanner Server.
- Export and import TEMS CellPlanner projects and their account information from or to the database (new from TEMS CellPlanner 8.0).

The User Administration tool is automatically installed on the same computer as the TEMS CellPlanner Server. If you need to remotely administer a TEMS CellPlanner Server, you can optionally install the User Administration tool on another computer, and from there login to the TEMS CellPlanner Server over the network.

10
Installing Oracle Software and Creating Database

This chapter describes how to install and configure Oracle software to be used for storage of TEMS CellPlanner projects.

Topics **Page**

About Oracle Database Installation 10-2
- Upgrade of the Oracle Database. 10-2
- Requirements for the Oracle Database Server 10-2
- Preparations Before Database Installation 10-3
- Oracle Database Data to Record 10-3

Install and Create the Database 10-5

Create TEMS CellPlanner Tablespace 10-16

Create Oracle User for Enterprise Server. 10-26

View Listener Port Number 10-32

Oracle Database Administration 10-34
- Back Up Oracle Database 10-34
- Restore Database from Backup 10-41
- Increase Performance 10-44

10.1 About Oracle Database Installation

This section describes the installation of the Oracle software on the Oracle database server and creation of the TEMS CellPlanner database instance in the Oracle database.

For more information on the Oracle database, see TEMS CellPlanner Servers for Shared Projects on page 9-3.

10.1.1 Upgrade of the Oracle Database

Prior to all Oracle upgrades, take a backup, see Back Up Oracle Database on page 10-34.

To upgrade an already installed Oracle database containing TEMS CellPlanner projects, there are two different scenarios:

- If only the Oracle software shall be upgraded to a new version, but the TEMS CellPlanner Enterprise Server shall not be upgraded, follow the upgrade instructions in the *Oracle manual*.
- If both the Oracle software and the TEMS CellPlanner Enterprise Server shall be upgraded to new versions, you must migrate the projects to not lose data. See Migrating to New Versions on page 7-1.

The related scenario - if the TEMS CellPlanner Enterprise Server but not the Oracle software shall be upgraded - also requires migration, see Prepare Installation of Enterprise Server on page 11-2.

10.1.2 Requirements for the Oracle Database Server

- The server to be used as an Oracle database server must have a fixed IP address before you install Oracle.
- If Oracle is installed on the same computer as the TEMS CellPlanner Enterprise Server, you must ensure that there is enough memory installed before you start using them together. See RAM Distribution in TEMS CellPlanner Server Computer on page 8-3.

10.1.3 Preparations Before Database Installation

You must be ready to enter this data during the installation of Oracle:

Data	Description
Global Database Name	Unique database identifier. Mandatory as you can define multiple databases, not only for TEMS CellPlanner, in the same Oracle installation. See example in Install and Create the Database, Step 8.
Database Storage Option	Physical storage of the database. See alternatives in Install and Create the Database, Step 12.
Username and password of administrator responsible for backups	If automated backups are desired, the name and password of the user responsible for backups are needed in Install and Create the Database, Step 14. This user must have administrative privileges and is normally already defined, but can as well be defined from the administrative console in Windows after the database installation.

10.1.4 Oracle Database Data to Record

When creating the Oracle database, record the data listed in the table below.

Note: *You need these parameter values for access to the database.*

Data	Description	Corresponding parameter in tcpserver-ds.xml [1)]
Password(s) of Oracle administrative user(s)	The password(s) of the pre-defined administrative Oracle user(s) as entered in Install and Create the Database, Step 16.	-
Database Control URL	The URL to the web interface for administration of the Oracle database, presented in Install and Create the Database, Step 21. Syntax: `<IP address or server name>:1158/em`	-
Oracle database server name	The IP address or name of the database server computer. The host part of the Database Control URL, see above.	Sub-parameter *host* in parameter *TCP database*
SID	The unique database identifier SID. By default identical to the Global Database Name. Obtained in Install and Create the Database, Step 21.	Sub-parameter *SID* in parameter *TCP database*

Data	Description	Corresponding parameter in tcpserver-ds.xml [1)]
User Name of Oracle user	The user identity used by the TEMS CellPlanner Enterprise Server to login to the database and get access to the associated tablespace. Entered in Create TEMS CellPlanner Tablespace, Step 1.	TCP 9.1 Oracle user
Password of Oracle user	The password used by the TEMS CellPlanner Enterprise Server to login to the database and get access to the associated tablespace. Entered in Create TEMS CellPlanner Tablespace, Step 1.	TCP 9.1 Oracle password

1) `tcpserver-ds.xml` is described in Configure Oracle Connection Parameters on page 11-13.

10.2 Install and Create the Database

Use this procedure to install Oracle 11g and create an empty database instance for TEMS CellPlanner.

For details about the Oracle part of the installation, see the *Oracle manual*.

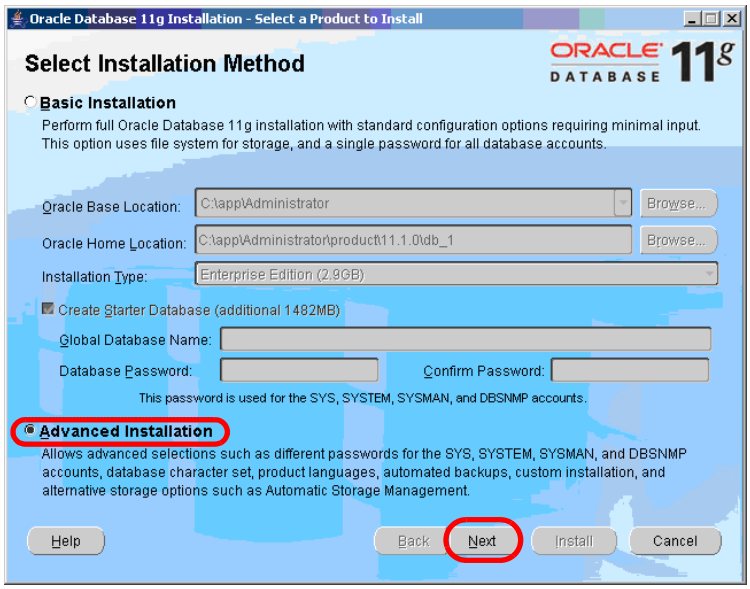
Prerequisites

- You must have administrator privileges on the computer where Oracle software shall be installed.
- Ensure that the Requirements for the Oracle Database Server on page 10-2 are met.
- Plan the data to enter during the Oracle installation, see Preparations Before Database Installation on page 10-3.
- If you upgrade from a previous Oracle version, read Upgrade of the Oracle Database on page 10-2.

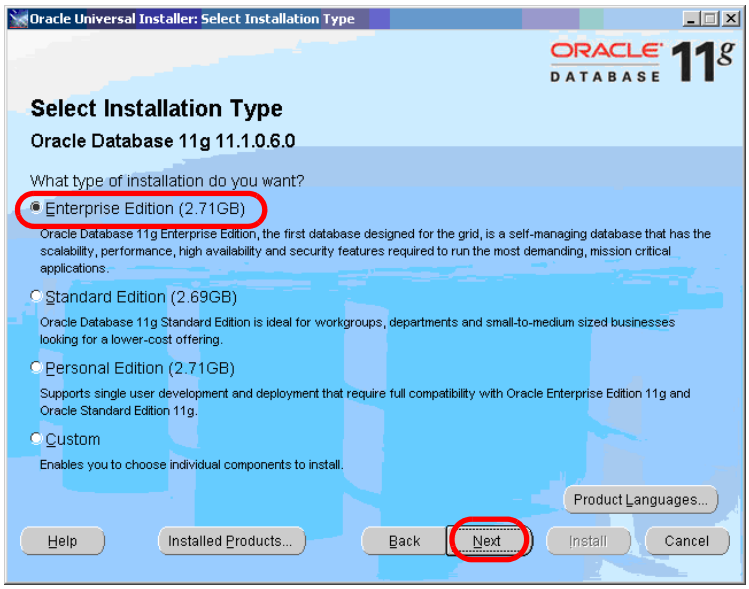
Procedure

1. Place the Oracle installation CD or DVD in the appropriate drive. If autorun is enabled, the **Select Installation Method** window appears automatically.

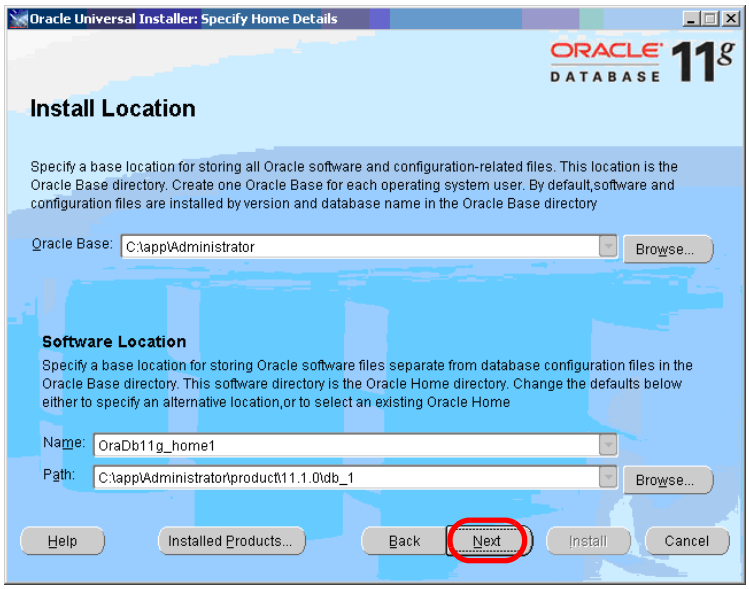
   If autorun is not enabled, select **Start Run** and enter the execution file name - normally `D:\setup.exe –` in the **Open** field. The installation starts and the **Select Installation Method** window appears:


Oracle Database 11g Installation - Select a Product to Install
Select Installation Method
ORACLE DATABASE 11g
Basic Installation
Perform full Oracle Database 11g installation with standard configuration options requiring minimal input.
This option uses file system for storage, and a single password for all database accounts.
Oracle Base Location:
C:\app\Administrator
Browse...
Oracle Home Location:
C:\app\Administrator\product\11.1.0\db_1
Browse...
Installation Type:
Enterprise Edition (2.9GB)
Create Starter Database (additional 1482MB)
Global Database Name:
Database Password:
Confirm Password:
This password is used for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts.
Advanced Installation
Allows advanced selections such as different passwords for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts, database character set, product languages, automated backups, custom installation, and alternative storage options such as Automatic Storage Management.
Help
Back
Next
Install
Cancel

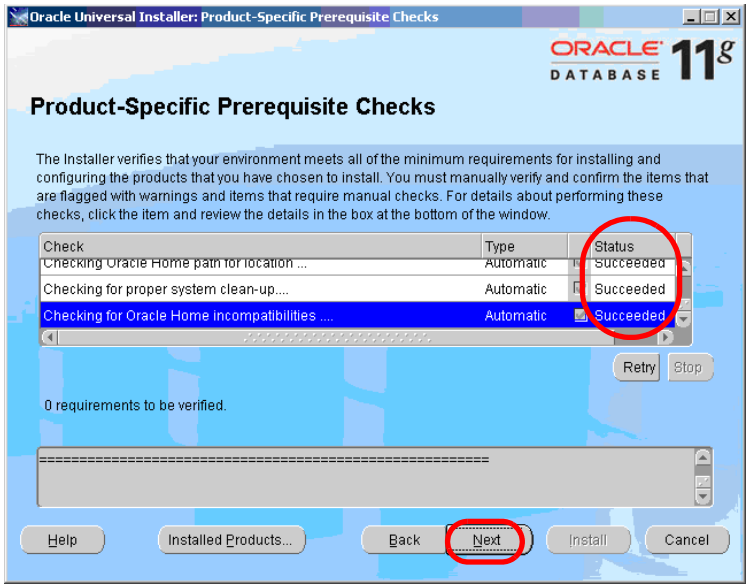
2. Select the **Advanced Installation** option and click **Next**. The **Select Installation Type** window appears:


Oracle Universal Installer: Select Installation Type
ORACLE 11g DATABASE
Select Installation Type
Oracle Database 11g 11.1.0.6.0
What type of installation do you want?
Enterprise Edition (2.71GB)
Oracle Database 11g Enterprise Edition, the first database designed for the grid, is a self-managing database that has the scalability, performance, high availability and security features required to run the most demanding, mission critical applications.
Standard Edition (2.69GB)
Oracle Database 11g Standard Edition is ideal for workgroups, departments and small-to-medium sized businesses looking for a lower-cost offering.
Personal Edition (2.71GB)
Supports single user development and deployment that require full compatibility with Oracle Enterprise Edition 11g and Oracle Standard Edition 11g.
Custom
Enables you to choose individual components to install.
Product Languages...
Help
Installed Products...
Back
Next
Install
Cancel

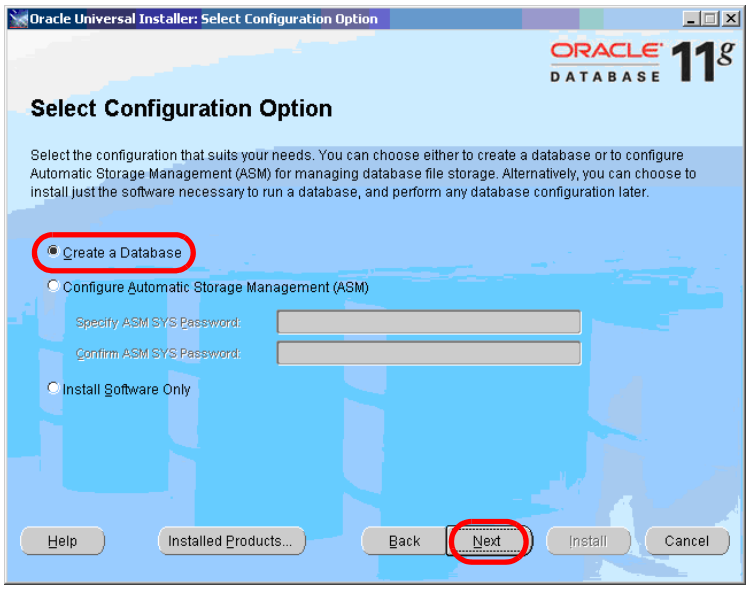
3. Select the default **Enterprise Edition** option and click **Next**. The **Specify Home Details** window appears. Accept the default values:


Oracle Universal Installer: Specify Home Details
ORACLE 11g DATABASE
Install Location
Specify a base location for storing all Oracle software and configuration-related files. This location is the Oracle Base directory. Create one Oracle Base for each operating system user. By default,software and configuration files are installed by version and database name in the Oracle Base directory
Oracle Base: C:\app\Administrator
Browse...
Software Location
Specify a base location for storing Oracle software files separate from database configuration files in the Oracle Base directory. This software directory is the Oracle Home directory. Change the defaults below either to specify an alternative location,or to select an existing Oracle Home
Name: OraDb11g_home1
Path: C:\app\Administrator\product\11.1.0\db_1
Browse...
Help
Installed Products...
Back
Next
Install
Cancel

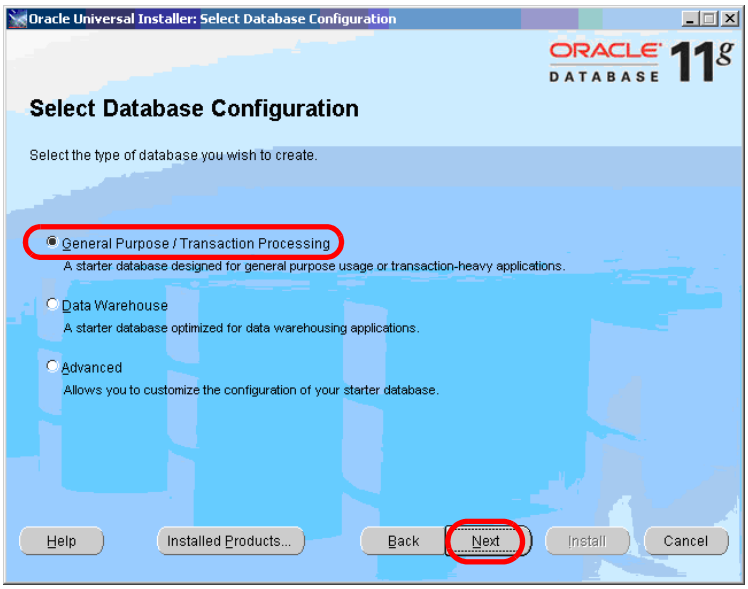
4. Click **Next**. The installation program checks that hardware and disk space meet the requirements. A status window is displayed:


Oracle Universal Installer: Product-Specific Prerequisite Checks
ORACLE 11g DATABASE
Product-Specific Prerequisite Checks
The Installer verifies that your environment meets all of the minimum requirements for installing and configuring the products that you have chosen to install. You must manually verify and confirm the items that are flagged with warnings and items that require manual checks. For details about performing these checks, click the item and review the details in the box at the bottom of the window.
Check
Type
Status
Checking for proper system clean-up....
Automatic
Succeeded
Checking for Oracle Home incompatibilities ....
Automatic
Succeeded
Retry
Stop
0 requirements to be verified.
Help
Installed Products...
Back
Next
Install
Cancel

5. When the status shows *Succeeded*, you can proceed by clicking **Next** to display the **Select Configuration Option** window:

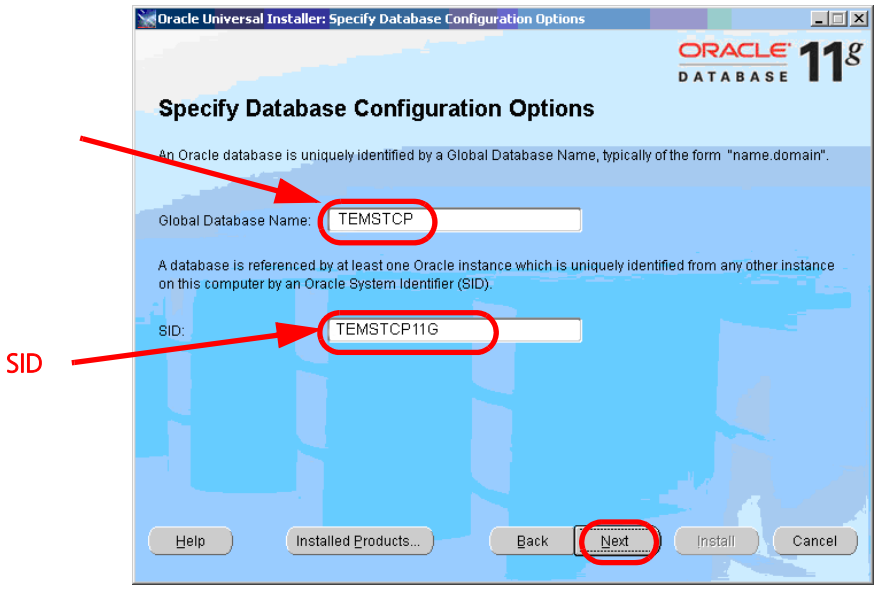

Oracle Universal Installer: Select Configuration Option
ORACLE 11g DATABASE
Select Configuration Option
Select the configuration that suits your needs. You can choose either to create a database or to configure Automatic Storage Management (ASM) for managing database file storage. Alternatively, you can choose to install just the software necessary to run a database, and perform any database configuration later.
Create a Database
Configure Automatic Storage Management (ASM)
Specify ASM SYS Password:
Confirm ASM SYS Password:
Install Software Only
Help
Installed Products...
Back
Next
Install
Cancel

6. Select **Create a Database** and click **Next**. The **Select Database Configuration** window appears:

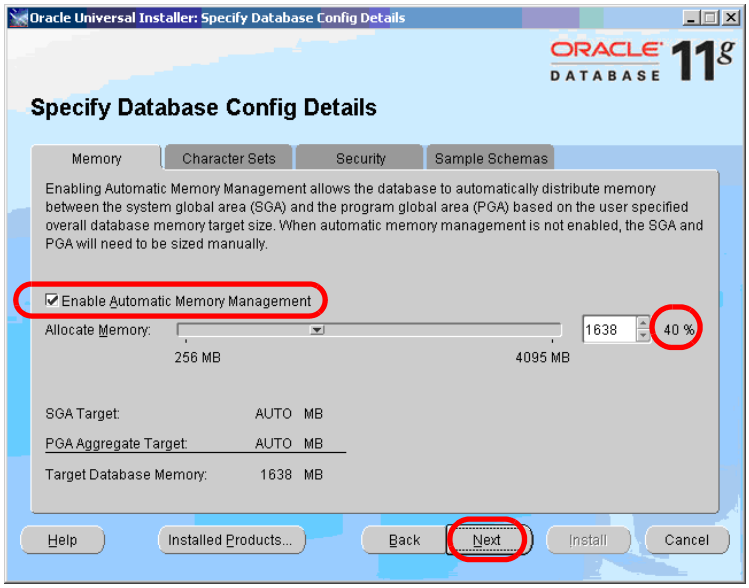

Oracle Universal Installer: Select Database Configuration
ORACLE 11g DATABASE
Select Database Configuration
Select the type of database you wish to create.
General Purpose / Transaction Processing
A starter database designed for general purpose usage or transaction-heavy applications.
Data Warehouse
A starter database optimized for data warehousing applications.
Advanced
Allows you to customize the configuration of your starter database.
Help
Installed Products...
Back
Next
Install
Cancel

7. Select **General Purpose / Transaction Processing** and click **Next**. The **Specify Database Configuration Options** window is displayed.

8. Enter the **Global Database Name** and **SID**, in the example `TEMSTCP` and `TEMSTCP11G` respectively:


Oracle Universal Installer: Specify Database Configuration Options
ORACLE 11g DATABASE
Specify Database Configuration Options
An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".
Global Database Name:
TEMSTCP
A database is referenced by at least one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle System Identifier (SID).
SID:
TEMSTCP11G
SID
Help
Installed Products...
Back
Next
Install
Cancel

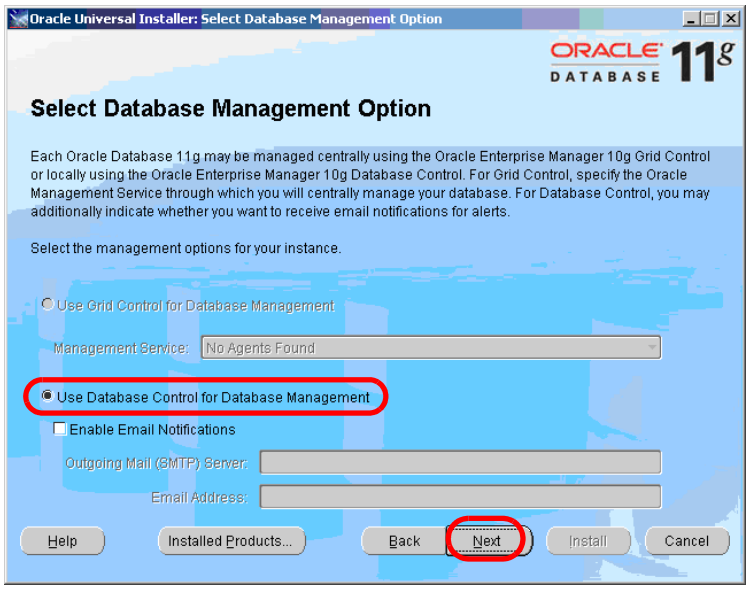
9. Click **Next**. The **Specify Database Config Details** window is displayed:


Oracle Universal Installer: Specify Database Config Details
ORACLE DATABASE 11g
Specify Database Config Details
Memory
Character Sets
Security
Sample Schemas
Enabling Automatic Memory Management allows the database to automatically distribute memory between the system global area (SGA) and the program global area (PGA) based on the user specified overall database memory target size. When automatic memory management is not enabled, the SGA and PGA will need to be sized manually.
Enable Automatic Memory Management
Allocate Memory:
1638
40 %
256 MB
4095 MB
SGA Target: AUTO MB
PGA Aggregate Target: AUTO MB
Target Database Memory: 1638 MB
Help
Installed Products...
Back
Next
Install
Cancel

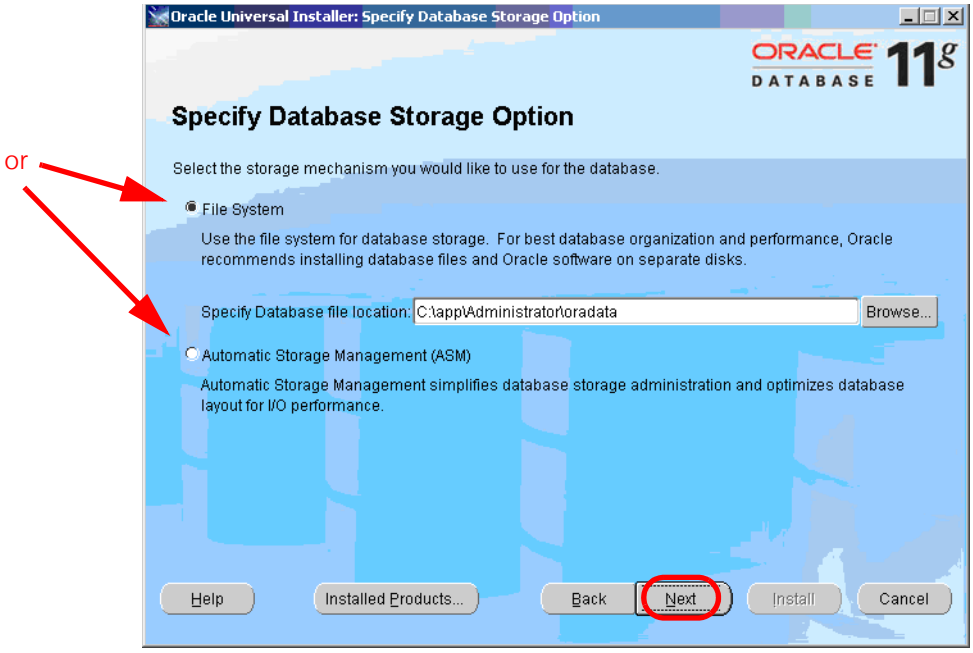
10. Select option **Enable Automatic Memory Management**. The percentage of allocated memory in the window shows how much of the computer's memory that will be reserved for the Oracle database. Modify if desired.

    Check the other tabs to modify any other parameter.

    Click **Next**. The **Select Database Management Option** window is displayed:


Oracle Universal Installer: Select Database Management Option
ORACLE DATABASE 11g
Select Database Management Option
Each Oracle Database 11g may be managed centrally using the Oracle Enterprise Manager 10g Grid Control or locally using the Oracle Enterprise Manager 10g Database Control. For Grid Control, specify the Oracle Management Service through which you will centrally manage your database. For Database Control, you may additionally indicate whether you want to receive email notifications for alerts.
Select the management options for your instance.
Use Grid Control for Database Management
Management Service:
No Agents Found
Use Database Control for Database Management
Enable Email Notifications
Outgoing Mail (SMTP) Server:
Email Address:
Help
Installed Products...
Back
Next
Install
Cancel

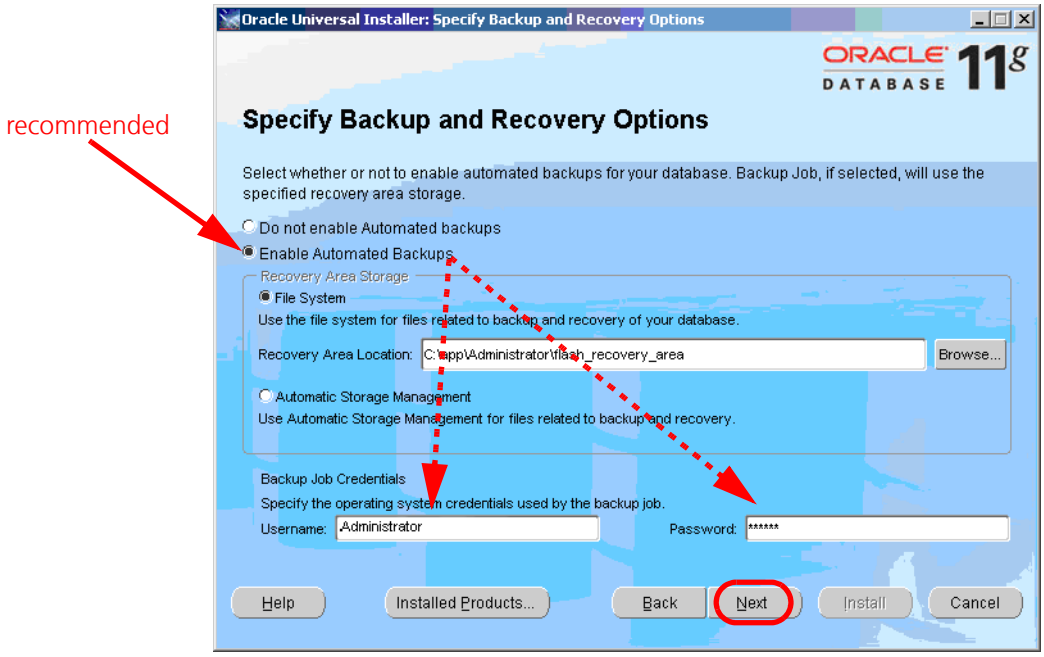
11. Select **Use Database Control for Database Management** and click **Next**. The **Specify Database Storage Option** window is displayed:


or
Oracle Universal Installer: Specify Database Storage Option
ORACLE 11g
DATABASE
Specify Database Storage Option
Select the storage mechanism you would like to use for the database.
File System
Use the file system for database storage. For best database organization and performance, Oracle recommends installing database files and Oracle software on separate disks.
Specify Database file location: C:\app\Administrator\oradata
Browse...
Automatic Storage Management (ASM)
Automatic Storage Management simplifies database storage administration and optimizes database layout for I/O performance.
Help
Installed Products...
Back
Next
Install
Cancel

12. Select the physical storage of the TEMS CellPlanner database.

Note: *Do not select the same disk as the one where the data to back up is stored. You would otherwise lose both database and backup in case of a disk crash.*

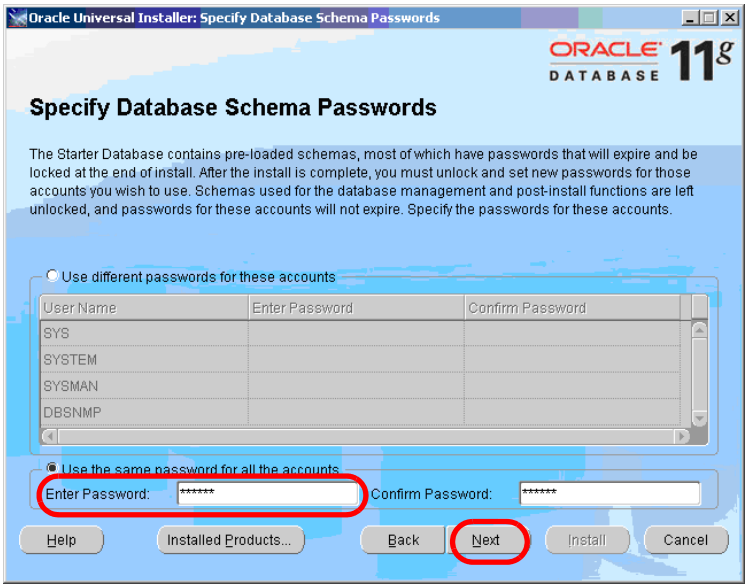
13. Click **Next**. The **Specify Backup and Recovery Options** window appears:


recommended
Oracle Universal Installer: Specify Backup and Recovery Options
ORACLE 11g DATABASE
Specify Backup and Recovery Options
Select whether or not to enable automated backups for your database. Backup Job, if selected, will use the specified recovery area storage.
Do not enable Automated backups
Enable Automated Backups
Recovery Area Storage
File System
Use the file system for files related to backup and recovery of your database.
Recovery Area Location: C:\app\Administrator\flash_recovery_area
Browse...
Automatic Storage Management
Use Automatic Storage Management for files related to backup and recovery.
Backup Job Credentials
Specify the operating system credentials used by the backup job.
Username: Administrator
Password: ******
Help
Installed Products...
Back
Next
Install
Cancel

14. Select the option that best meets your requirements on backup handling. It is highly recommended to select **Enable Automated Backups**, which also requires you to enter the **Username** and **Password** of the administrative Windows user responsible for backups, in this example `Administrator`. This user must be allowed to log on as a batch job.

Note: *Do as follows to allow the backup responsible user to log on as batch job: In the Control Panel, select Administrative Tools and further Local Security Policy. In the Local Policies window, select User Rights Assignment. Double-click on* ***Log on as a batch job*** *and* ***Add*** *the policy to the user.*

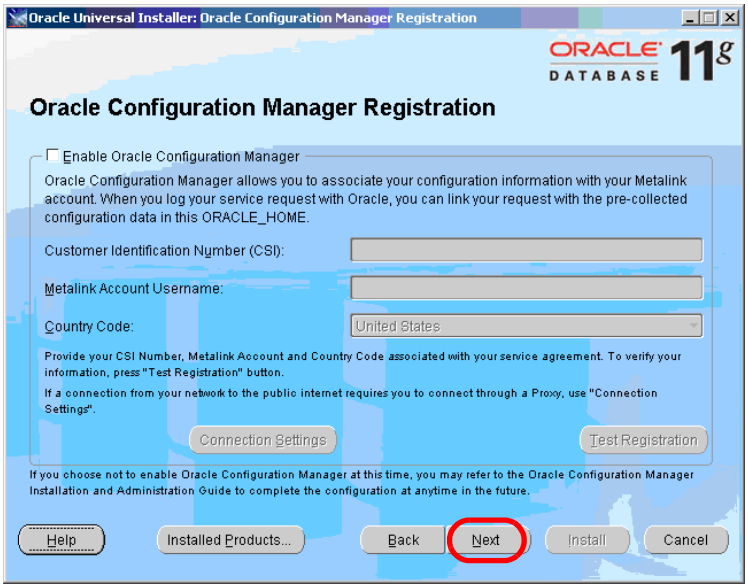
15. Click **Next**. The **Specify Database Schema Passwords** window appears, with a list of administrative Oracle users:


Oracle Universal Installer: Specify Database Schema Passwords
ORACLE DATABASE 11g
Specify Database Schema Passwords
The Starter Database contains pre-loaded schemas, most of which have passwords that will expire and be locked at the end of install. After the install is complete, you must unlock and set new passwords for those accounts you wish to use. Schemas used for the database management and post-install functions are left unlocked, and passwords for these accounts will not expire. Specify the passwords for these accounts.
Use different passwords for these accounts
User Name
Enter Password
Confirm Password
SYS
SYSTEM
SYSMAN
DBSNMP
Use the same password for all the accounts
Enter Password:
Confirm Password:
Help
Installed Products...
Back
Next
Install
Cancel

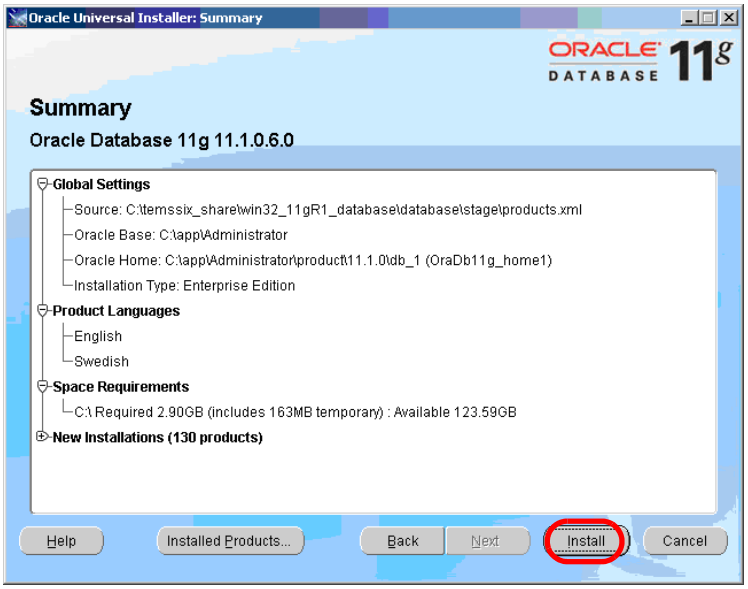
Note: *This list shows the administrative Oracle users, not to mix up with the user interconnecting the TEMS CellPlanner Enterprise Server with the Oracle database, as defined in* Create Oracle User for Enterprise Server. *on page 10-26.*

16. Enter one password for each administrative Oracle user, or a single password for all of them. The latter choice is most convenient if one person does all administration of the database instance.

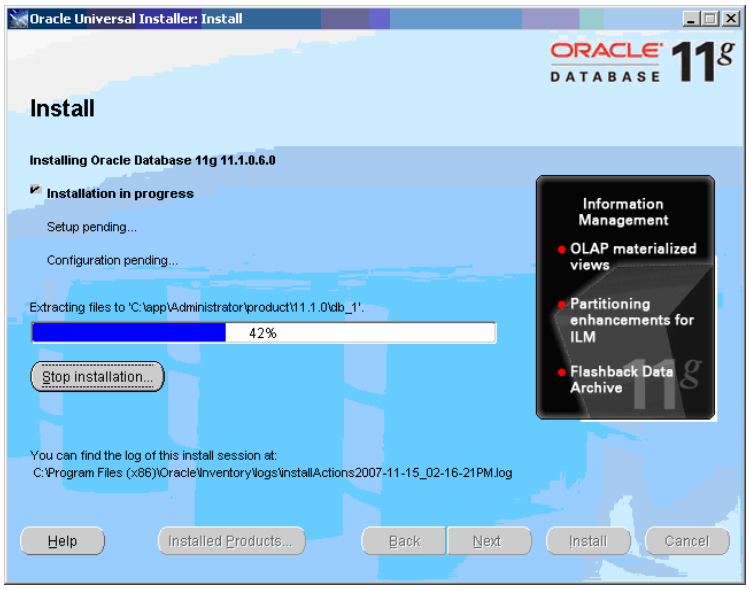
17. Record the password(s) for later use and click **Next**. The **Oracle Configuration Manager Registration** window is displayed:


Oracle Universal Installer: Oracle Configuration Manager Registration
ORACLE 11g DATABASE
Oracle Configuration Manager Registration
Enable Oracle Configuration Manager
Oracle Configuration Manager allows you to associate your configuration information with your Metalink account. When you log your service request with Oracle, you can link your request with the pre-collected configuration data in this ORACLE_HOME.
Customer Identification Number (CSI):
Metalink Account Username:
Country Code:
United States
Provide your CSI Number, Metalink Account and Country Code associated with your service agreement. To verify your information, press "Test Registration" button.
If a connection from your network to the public internet requires you to connect through a Proxy, use "Connection Settings".
Connection Settings
Test Registration
If you choose not to enable Oracle Configuration Manager at this time, you may refer to the Oracle Configuration Manager Installation and Administration Guide to complete the configuration at anytime in the future.
Help
Installed Products...
Back
Next
Install
Cancel

18. Click **Next**. The **Summary** window displays selected installation options, as shown in the following example:

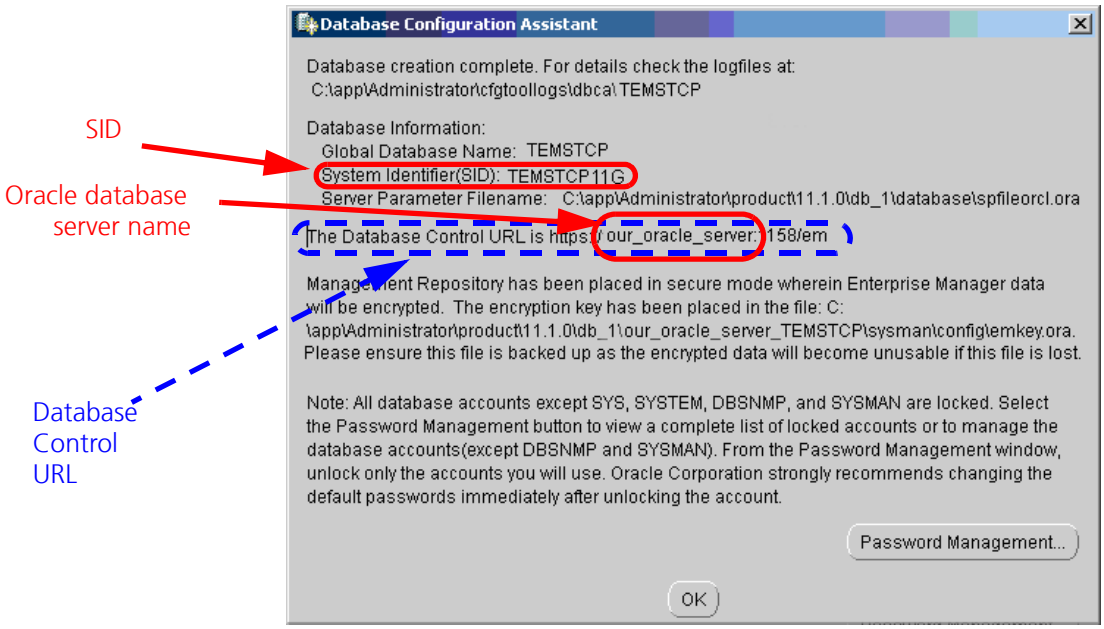


19. Click **Install**. The **Install** window shows the progress of the installation:

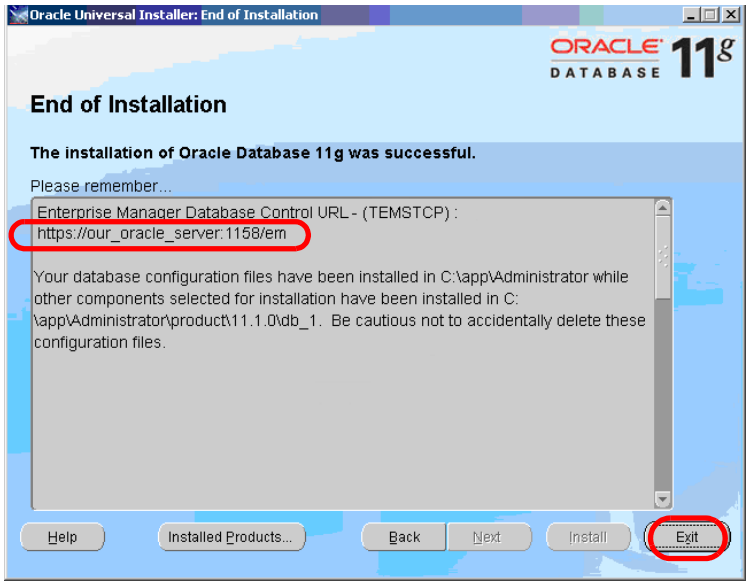


20. *Optional*: If your Oracle installation consists of several CDs, change to the corresponding CD when prompted.

21. As the **Create a Database** option was selected in Step 6, the database instance is created, in this example `TEMSTCP`. When the software installation is completed and the database instance created, the **Database Configuration Assistant** window appears:


SID
Oracle database server name
Database Control URL
Database Configuration Assistant
Database creation complete. For details check the logfiles at:
C:\app\Administrator\cfgtoollogs\dbca\TEMSTCP
Database Information:
Global Database Name: TEMSTCP
System Identifier(SID): TEMSTCP11G
Server Parameter Filename: C:\app\Administrator\product\11.1.0\db_1\database\spfileorcl.ora
The Database Control URL is https://our_oracle_server:5158/em
Management Repository has been placed in secure mode wherein Enterprise Manager data will be encrypted. The encryption key has been placed in the file: C:\app\Administrator\product\11.1.0\db_1\our_oracle_server_TEMSTCP\sysman\config\emkey.ora.
Please ensure this file is backed up as the encrypted data will become unusable if this file is lost.
Note: All database accounts except SYS, SYSTEM, DBSNMP, and SYSMAN are locked. Select the Password Management button to view a complete list of locked accounts or to manage the database accounts(except DBSNMP and SYSMAN). From the Password Management window, unlock only the accounts you will use. Oracle Corporation strongly recommends changing the default passwords immediately after unlocking the account.
Password Management...
OK

22. Record the **Database Control URL**, the **SID** and the **Oracle database server name** for later use, see Oracle Database Data to Record on page 10-3.
23. Read the recommendations in the window and take actions if needed.
24. Click **OK**. The **End of Installation** window appears:


Oracle Universal Installer: End of Installation
ORACLE 11g
DATABASE
End of Installation
The installation of Oracle Database 11g was successful.
Please remember...
Enterprise Manager Database Control URL - (TEMSTCP) :
https://our_oracle_server:1158/em
Your database configuration files have been installed in C:\app\Administrator while other components selected for installation have been installed in C:\app\Administrator\product\11.1.0\db_1. Be cautious not to accidentally delete these configuration files.
Help
Installed Products...
Back
Next
Install
Exit

25. Click **Exit** and **Yes** to confirm.

The empty database instance has now been created and its administrative Oracle users are defined.

Proceed with the subsequent chapters to create a TEMS CellPlanner tablespace in the Oracle database, and an Oracle user for login by the TEMS CellPlanner Enterprise Server.

10.3 Create TEMS CellPlanner Tablespace

Use this procedure to create a tablespace for a TEMS CellPlanner version, and associate it with a data storage area.

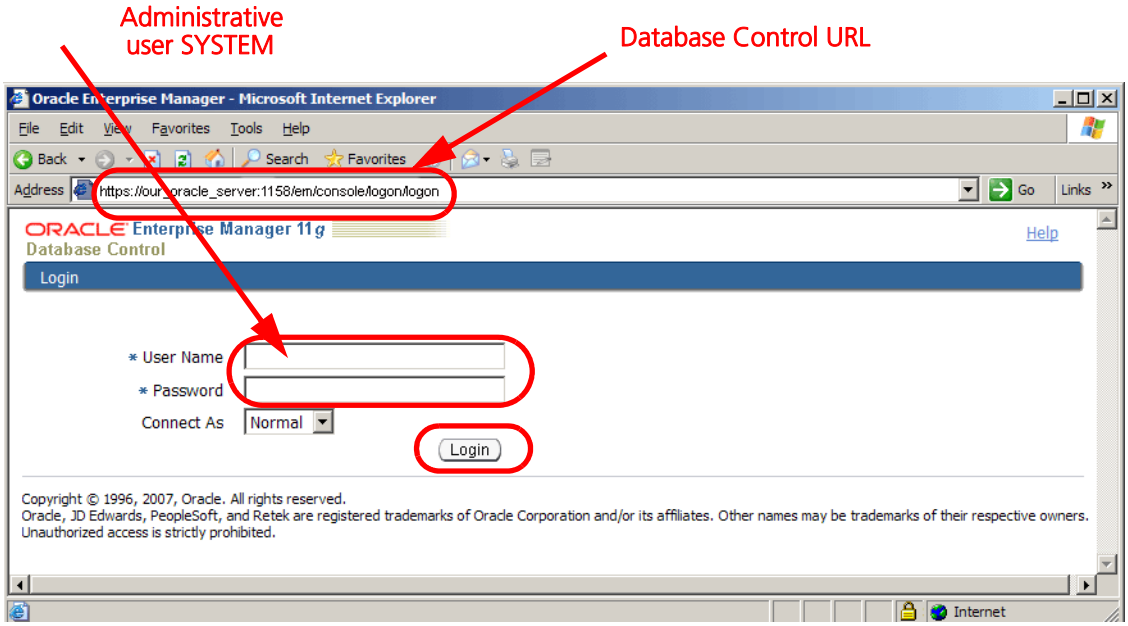
At upgrade, create a new tablespace for the new TEMS CellPlanner version. The tablespace of the previous TEMS CellPlanner version remains until you delete it.

Prerequisites

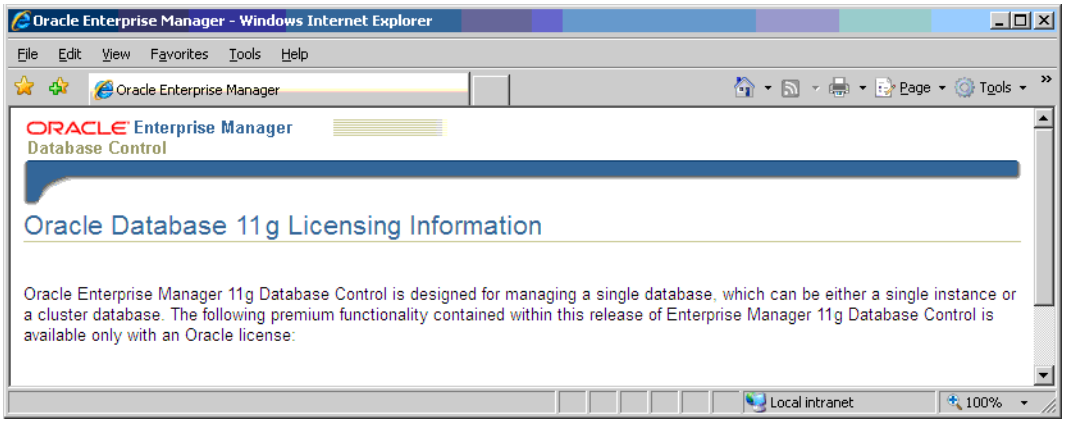
- You must have administrator privileges on Oracle database server.
- You have created a TEMS CellPlanner database as described in Install and Create the Database on page 10-5.

Procedure

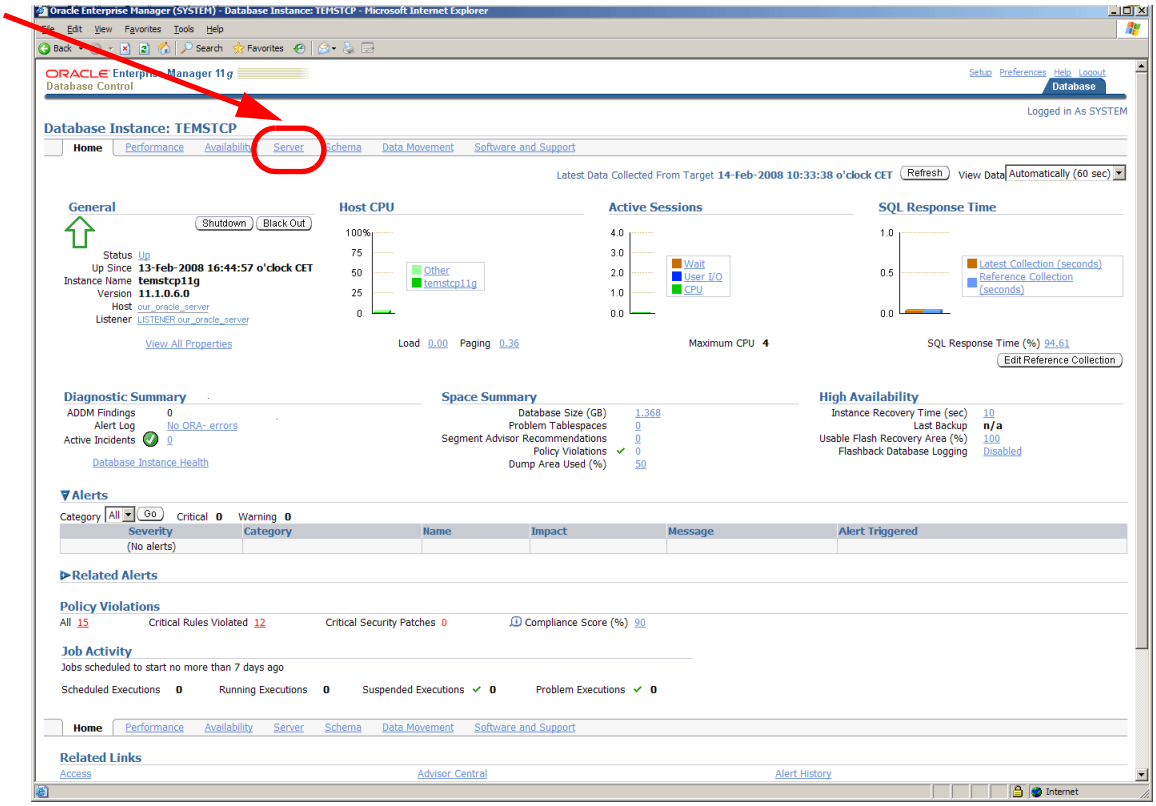
1. Open Windows Internet Explorer or similar. In the URL field, enter the **Database Control URL** obtained in section Install and Create the Database, Step 21. The web page **Login to Database** window appears:


Administrative user SYSTEM
Database Control URL
Oracle Enterprise Manager - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address https://our_oracle_server:1158/em/console/logon/logon
Go Links
ORACLE Enterprise Manager 11g
Database Control
Help
Login
* User Name
* Password
Connect As
Normal
Login
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
Unauthorized access is strictly prohibited.
Internet

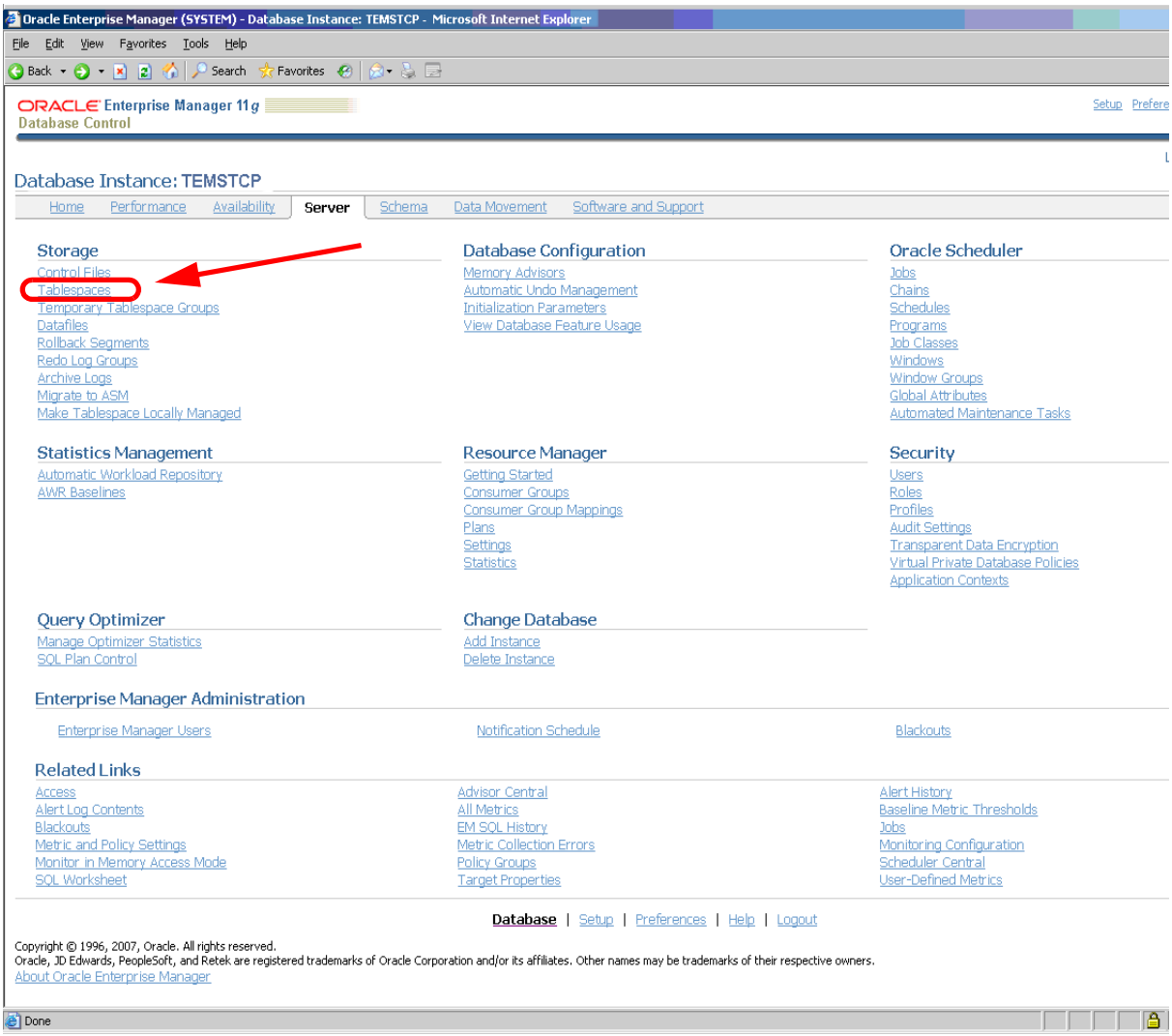
2. Enter `SYSTEM` as User Name, and its password, see Install and Create the Database on page 10-5, Step 16. Click **Login**. The **Licensing Information** window is displayed, as in the example below:


Oracle Enterprise Manager - Windows Internet Explorer
File Edit View Favorites Tools Help
Oracle Enterprise Manager
Page Tools
ORACLE Enterprise Manager
Database Control
Oracle Database 11g Licensing Information
Oracle Enterprise Manager 11g Database Control is designed for managing a single database, which can be either a single instance or a cluster database. The following premium functionality contained within this release of Enterprise Manager 11g Database Control is available only with an Oracle license:
Local intranet
100%

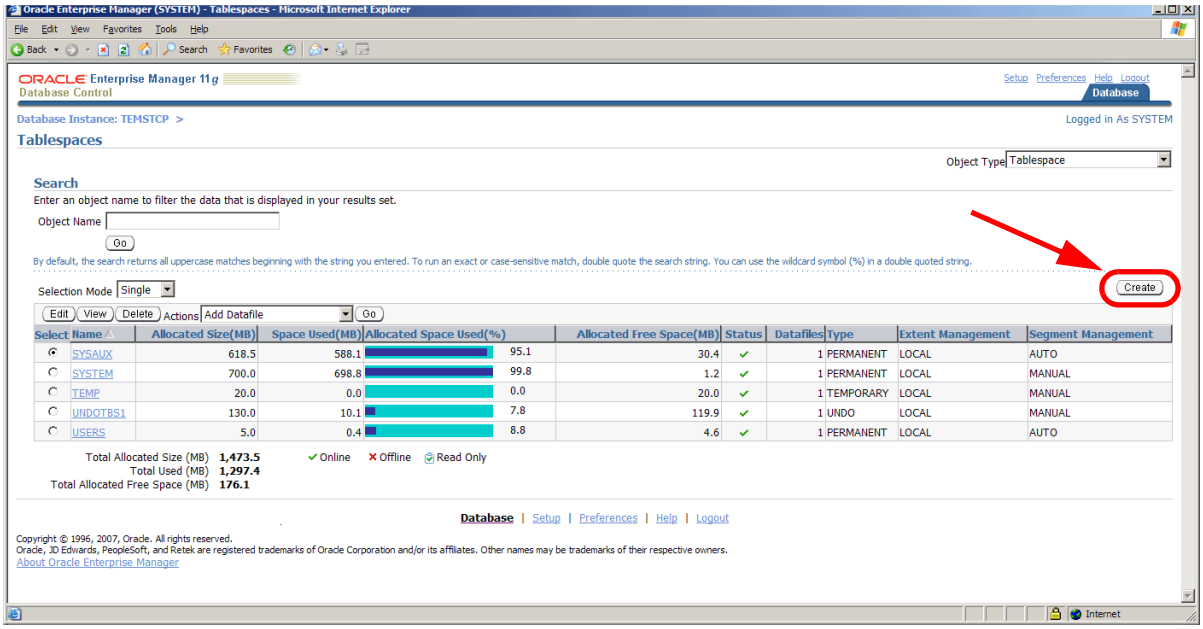
3. Scroll down to the bottom and accept the licensing conditions. The **Database Instance** home page appears:



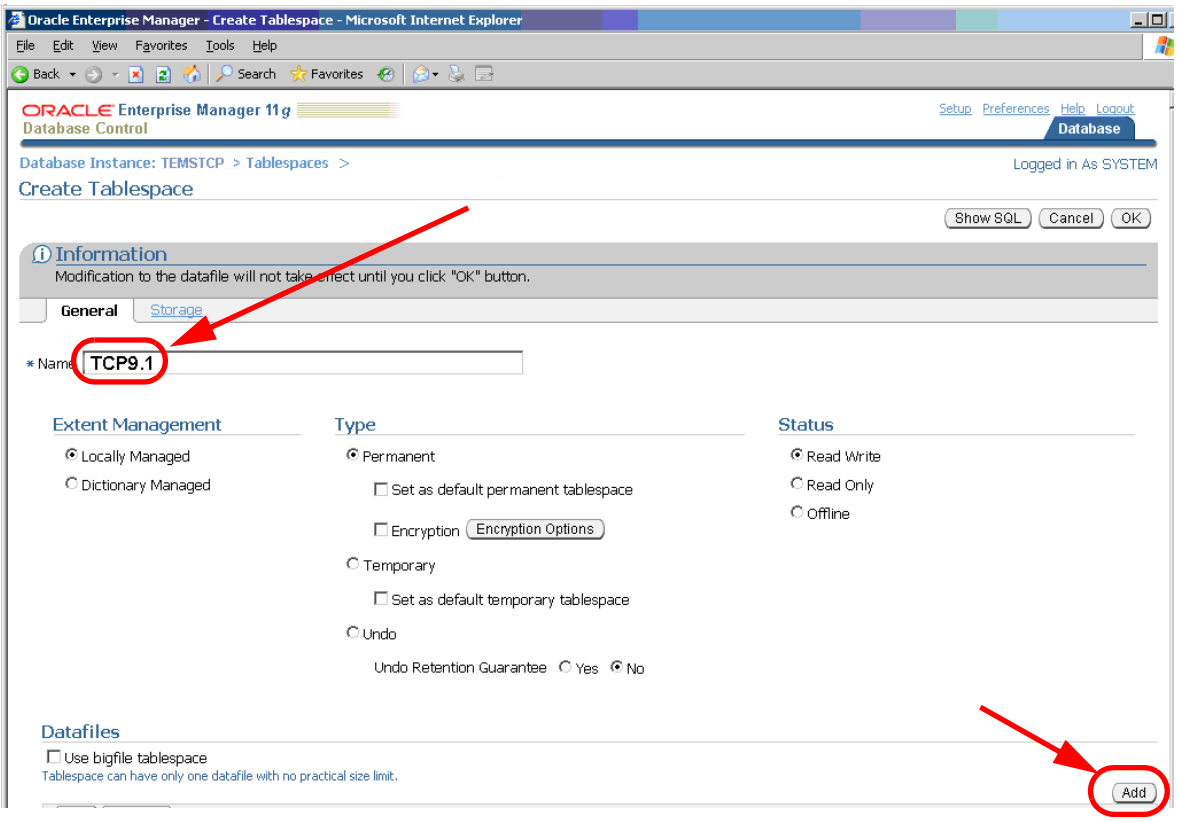
4. Select the **Server** tab. The **Server** window is displayed, as in the following example:



5. Select **Tablespaces** in the **Storage** area. The **Tablespaces** window is displayed, as shown in the following example:


Oracle Enterprise Manager (SYSTEM) - Tablespaces - Microsoft Internet Explorer
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP >
Logged in As SYSTEM
Tablespaces
Object Type Tablespace
Search
Enter an object name to filter the data that is displayed in your results set.
Object Name
Go
By default, the search returns all uppercase matches beginning with the string you entered. To run an exact or case-sensitive match, double quote the search string. You can use the wildcard symbol (%) in a double quoted string.
Create
Selection Mode Single
Edit View Delete Actions Add Datafile Go
Select Name Allocated Size(MB) Space Used(MB) Allocated Space Used(%) Allocated Free Space(MB) Status Datafiles Type Extent Management Segment Management
SYSAUX 618.5 588.1 95.1 30.4 1 PERMANENT LOCAL AUTO
SYSTEM 700.0 698.8 99.8 1.2 1 PERMANENT LOCAL MANUAL
TEMP 20.0 0.0 0.0 20.0 1 TEMPORARY LOCAL MANUAL
UNDOTBS1 130.0 10.1 7.8 119.9 1 UNDO LOCAL MANUAL
USERS 5.0 0.4 8.8 4.6 1 PERMANENT LOCAL AUTO
Total Allocated Size (MB) 1,473.5
Total Used (MB) 1,297.4
Total Allocated Free Space (MB) 176.1
Online Offline Read Only
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

6. Click **Create** to display the **Create Tablespace** window:

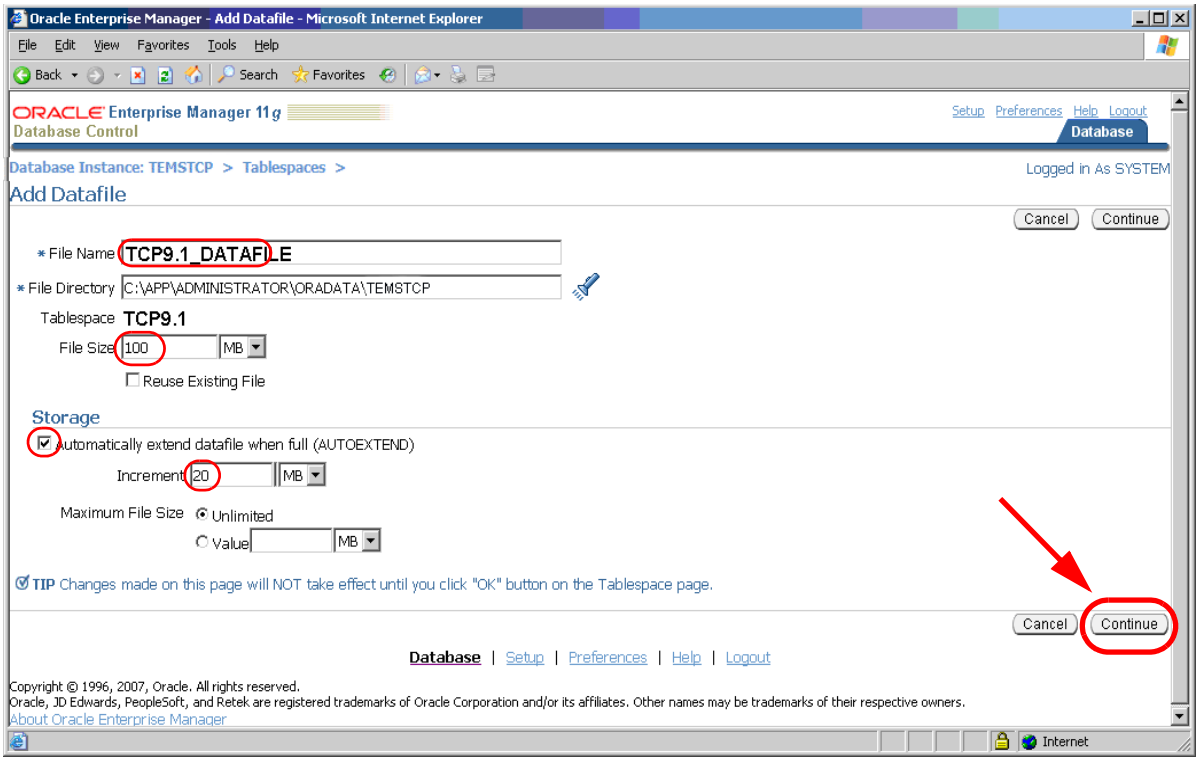


7. Enter the name of the tablespace, preferably related to the TEMS CellPlanner version, in the example `TCP9.1`.
8. Record the tablespace name for future use.
9. Click **Add**. The **Add Datafile** window appears.

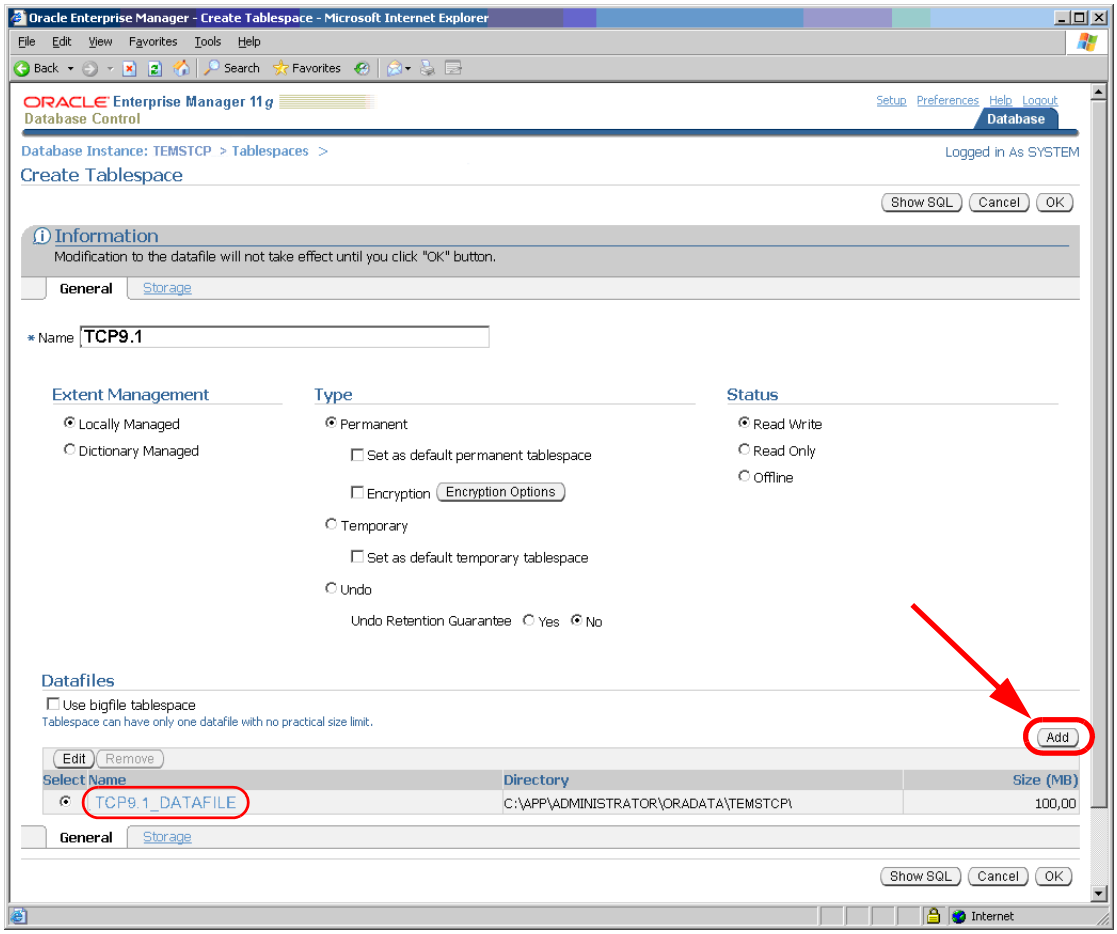
10. Enter the following parameters in the **Add Datafile** window:

File Name	Any name, preferably related to the name of the tablespace, in our example `TCP9.1_DATAFILE`
File Size	The original size of memory reserved on disk for this tablespace. If exceeded, it will be increased with the amount of memory defined in the **Increment** parameter. Count with 1.7 kB * number of sites * number of users. If number of sites and users are unknown, start with 100 MB.
Storage	Select **Automatically extend datafile when full**, unless you have a strong reason not to make this choice
Increment	20 MB

The result looks as in the following example:


Oracle Enterprise Manager - Add Datafile - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Tablespaces >
Logged in As SYSTEM
Add Datafile
Cancel Continue
* File Name TCP9.1_DATAFILE
* File Directory C:\APP\ADMINISTRATOR\ORADATA\TEMSTCP
Tablespace TCP9.1
File Size 100 MB
Reuse Existing File
Storage
Automatically extend datafile when full (AUTOEXTEND)
Increment 20 MB
Maximum File Size Unlimited
Value MB
TIP Changes made on this page will NOT take effect until you click "OK" button on the Tablespace page.
Cancel Continue
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

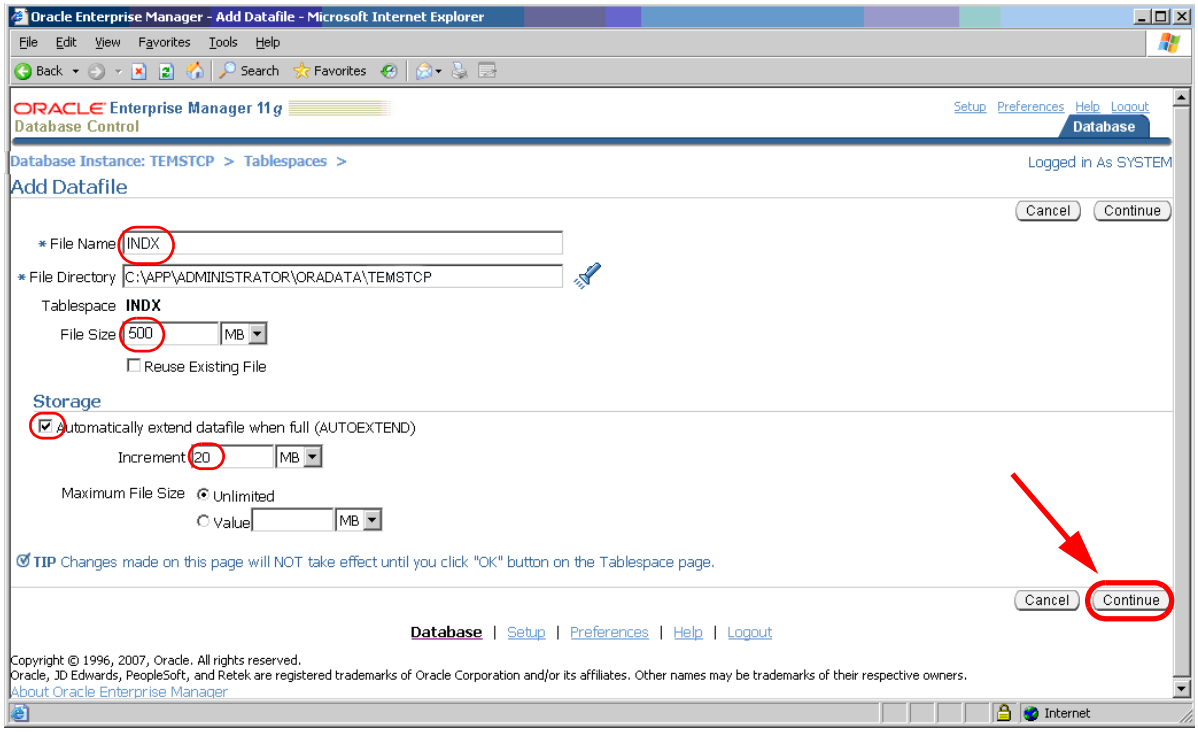
11. Click **Continue**. The **Create Tablespace** window reappears, now including the associated datafile in the list of **Datafiles**, as in the following example:


Oracle Enterprise Manager - Create Tablespace - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Tablespaces >
Logged in As SYSTEM
Create Tablespace
Show SQL Cancel OK
Information
Modification to the datafile will not take effect until you click "OK" button.
General Storage
* Name TCP9.1
Extent Management
Locally Managed
Dictionary Managed
Type
Permanent
Set as default permanent tablespace
Encryption Encryption Options
Temporary
Set as default temporary tablespace
Undo
Undo Retention Guarantee Yes No
Status
Read Write
Read Only
Offline
Datafiles
Use bigfile tablespace
Tablespace can have only one datafile with no practical size limit.
Add
Edit Remove
Select Name
Directory
Size (MB)
TCP9.1_DATAFILE
C:\APP\ADMINISTRATOR\ORADATA\TEMSTCP\
100,00
General Storage
Show SQL Cancel OK
Internet

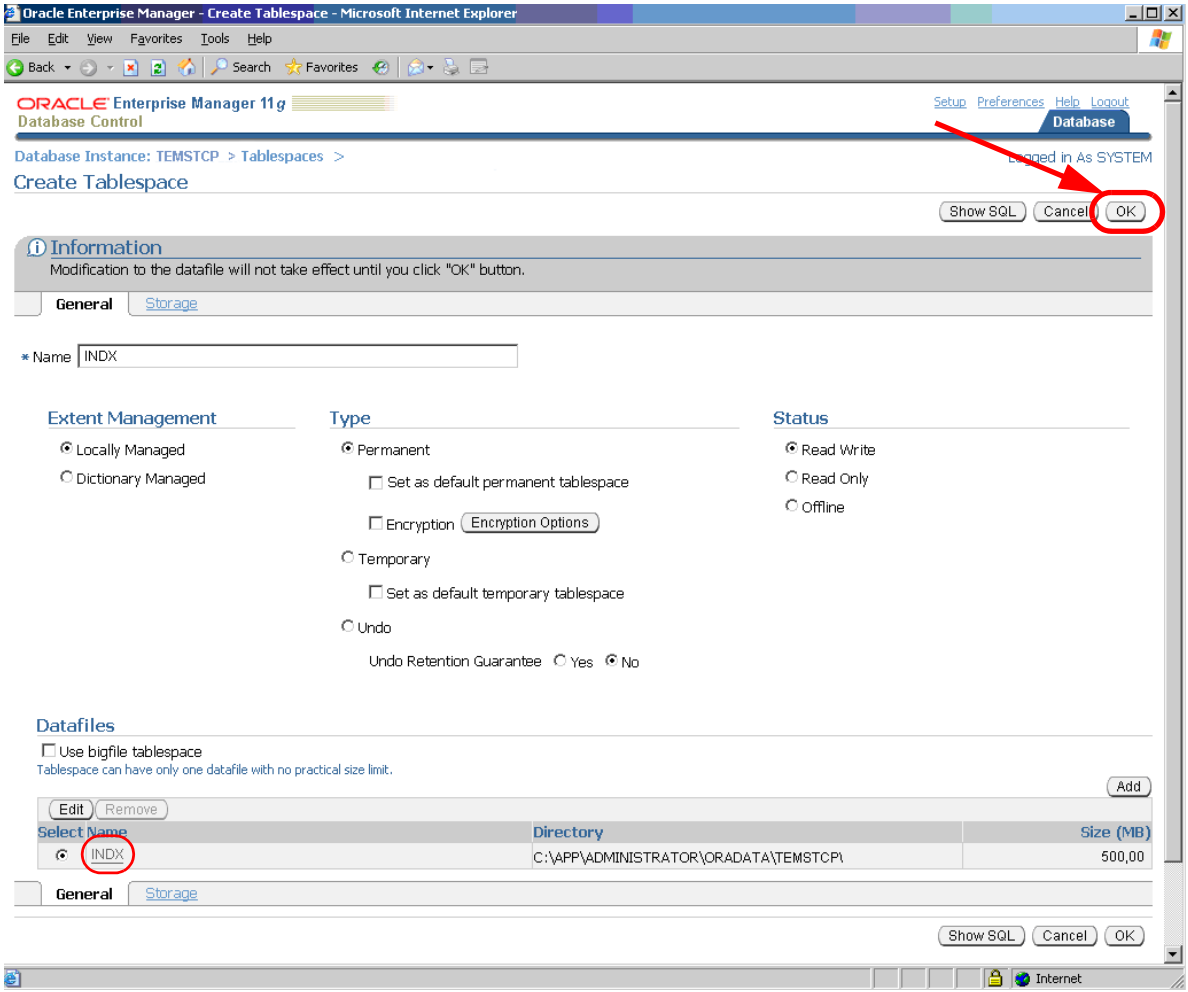
12. The TEMS CellPlanner database instance needs one INDX tablespace. Repeat Step 5 to Step 11, to create a tablespace of name `INDX` with datafile parameter values according to the following table:

File Name	`INDX`. Exactly this name must be entered.
File Size	500 MB The original size of memory reserved on disk for this tablespace. If exceeded, it will be increased with the amount of memory defined in the **Increment** parameter.
Storage	Select **Automatically extend datafile when full** unless you have a strong reason not to make this choice.
Increment	20 MB

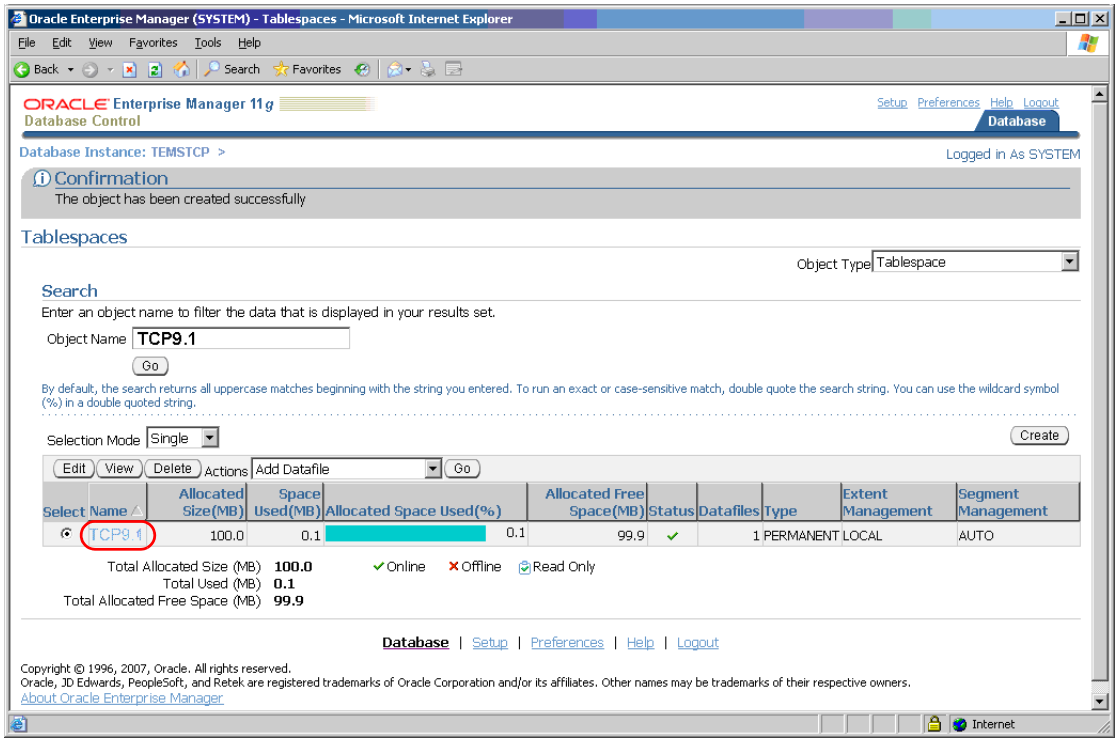
The result looks as in the following example:


Oracle Enterprise Manager - Add Datafile - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Tablespaces >
Logged in As SYSTEM
Add Datafile
Cancel Continue
* File Name INDX
* File Directory C:\APP\ADMINISTRATOR\ORADATA\TEMSTCP
Tablespace INDX
File Size 500 MB
Reuse Existing File
Storage
Automatically extend datafile when full (AUTOEXTEND)
Increment 20 MB
Maximum File Size Unlimited
Value MB
TIP Changes made on this page will NOT take effect until you click "OK" button on the Tablespace page.
Cancel Continue
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

13. Click **Continue**. The **Create Tablespace** window reappears, now including the INDX datafile in the list of **Datafiles**:



14. Click **OK** to complete the tablespace creation. The **Tablespaces** window reappears, including the created tablespaces. In the example below, the `TCP9.1` tablespace is filtered out:


Oracle Enterprise Manager (SYSTEM) - Tablespaces - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP >
Logged in As SYSTEM
Confirmation
The object has been created successfully
Tablespaces
Object Type Tablespace
Search
Enter an object name to filter the data that is displayed in your results set.
Object Name TCP9.1
Go
By default, the search returns all uppercase matches beginning with the string you entered. To run an exact or case-sensitive match, double quote the search string. You can use the wildcard symbol (%) in a double quoted string.
Selection Mode Single
Create
Edit View Delete Actions Add Datafile Go
Select Name Allocated Size(MB) Space Used(MB) Allocated Space Used(%) Allocated Free Space(MB) Status Datafiles Type Extent Management Segment Management
TCP9.1 100.0 0.1 0.1 99.9 1 PERMANENT LOCAL AUTO
Total Allocated Size (MB) 100.0
Total Used (MB) 0.1
Total Allocated Free Space (MB) 99.9
Online Offline Read Only
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

Proceed with the next chapter to create an Oracle user to be used for login by the the TEMS CellPlanner Enterprise Server.

10.4 Create Oracle User for Enterprise Server.

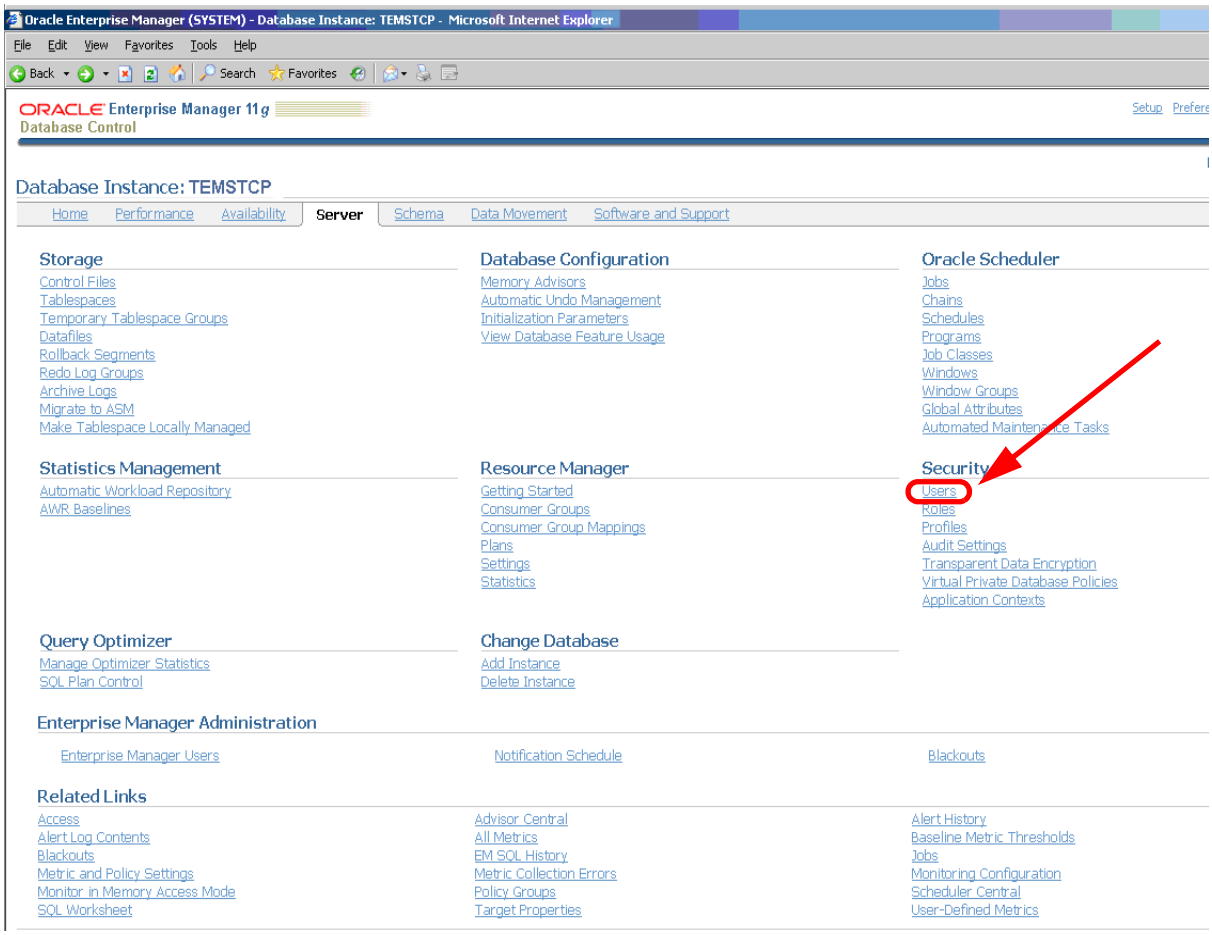
The TEMS CellPlanner Enterprise Server. accesses the Oracle database by logging in to it as an Oracle user. With this procedure you create this Oracle user. The user name and password entered here shall also be entered into a configuration file read by the TEMS CellPlanner Enterprise Server, see Configure Oracle Connection Parameters on page 11-13.

Prerequisites

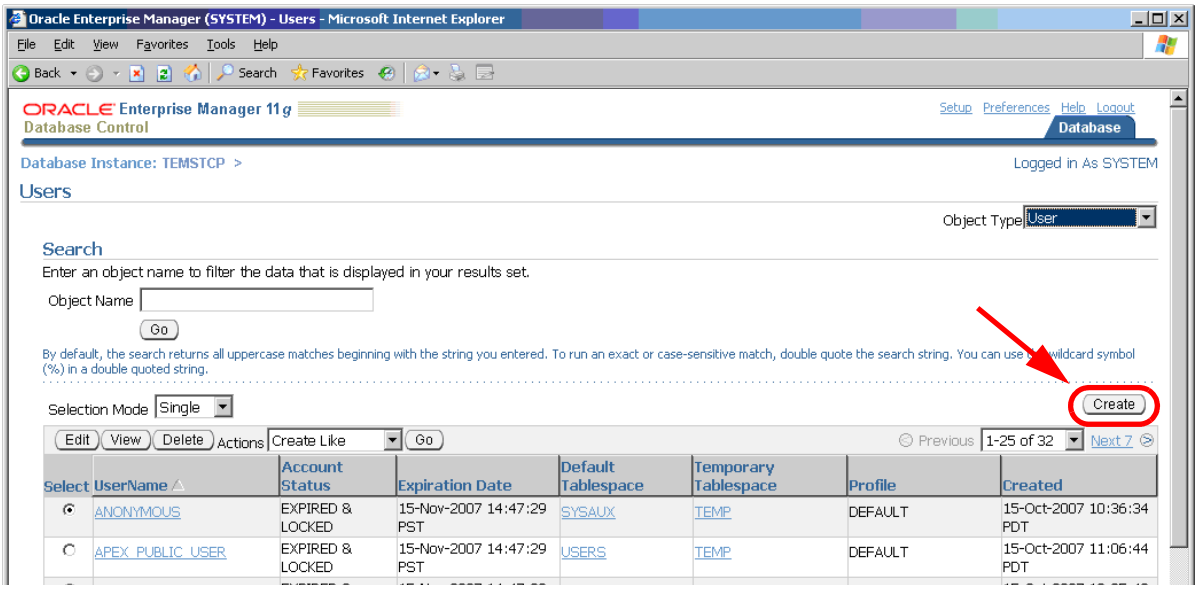
- You must have administrator privileges on the Oracle database server
- You have created the tablespace for this TEMS CellPlanner version as described in Create TEMS CellPlanner Tablespace on page 10-16

Procedure

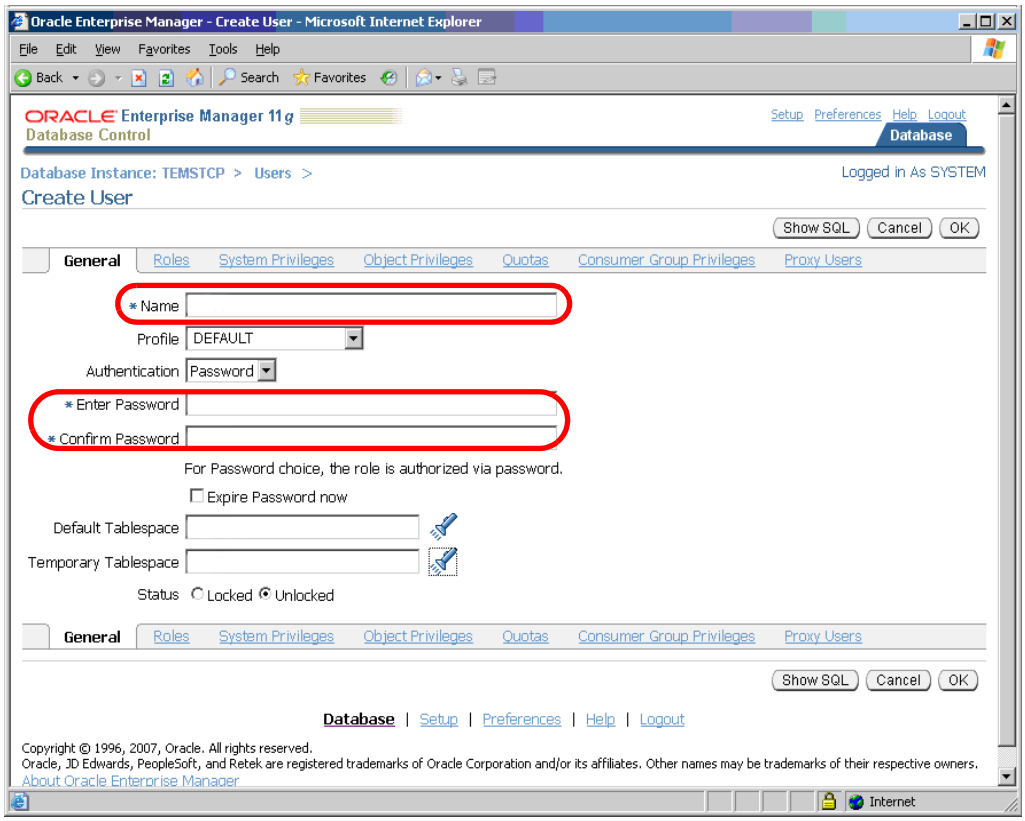
1. Return to the **Server** tab as shown in Step 4 in Create TEMS CellPlanner Tablespace on page 10-16. Scroll down and select **Users** in the **Security** area, as shown in the following example:



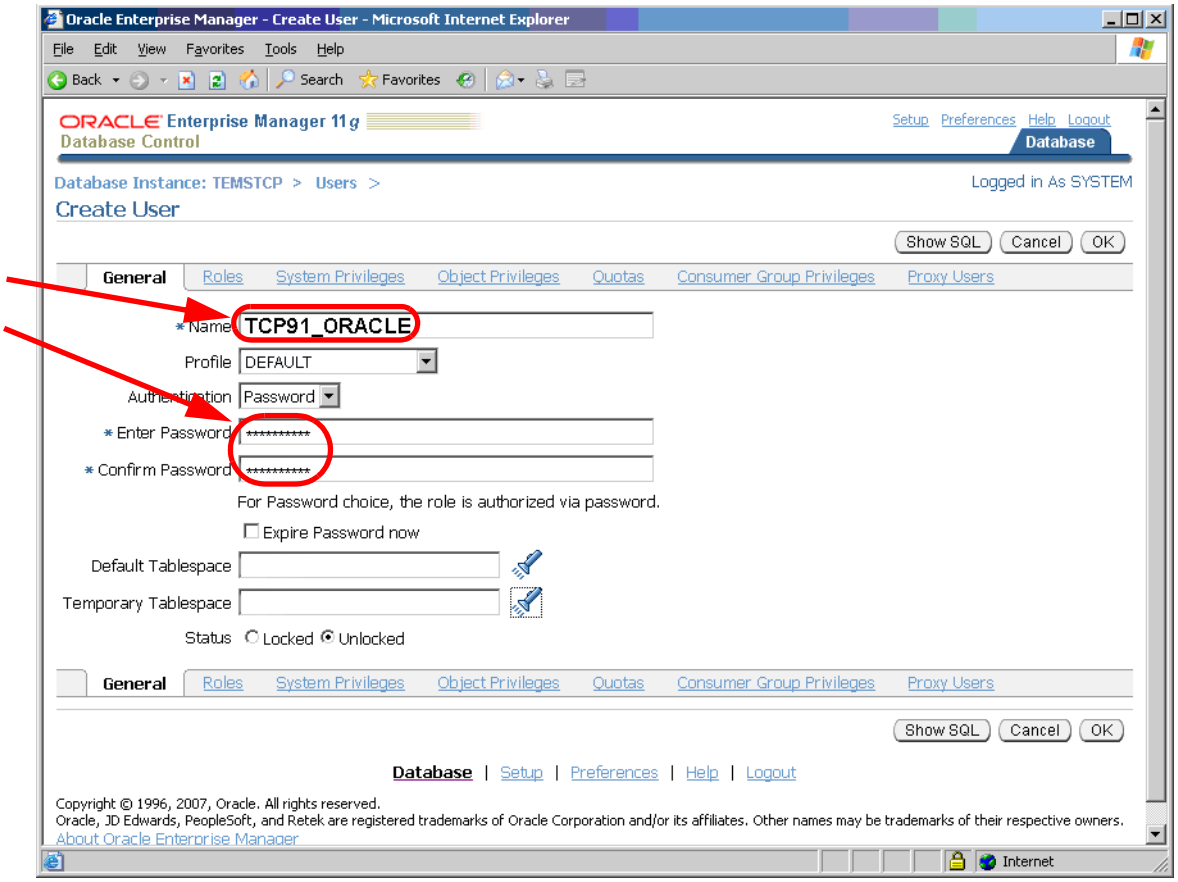
2. The **Users** window is displayed. Click **Create** as in the example below:


Oracle Enterprise Manager (SYSTEM) - Users - Microsoft Internet Explorer
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP >
Logged in As SYSTEM
Users
Object Type User
Search
Enter an object name to filter the data that is displayed in your results set.
Object Name
Go
Selection Mode Single
Create
Edit View Delete Actions Create Like Go
Previous 1-25 of 32 Next 7
Select UserName Account Status Expiration Date Default Tablespace Temporary Tablespace Profile Created
ANONYMOUS EXPIRED & LOCKED 15-Nov-2007 14:47:29 PST SYSAUX TEMP DEFAULT 15-Oct-2007 10:36:34 PDT
APEX_PUBLIC_USER EXPIRED & LOCKED 15-Nov-2007 14:47:29 PST USERS TEMP DEFAULT 15-Oct-2007 11:06:44 PDT

3. The **Create User** window with empty fields appears:

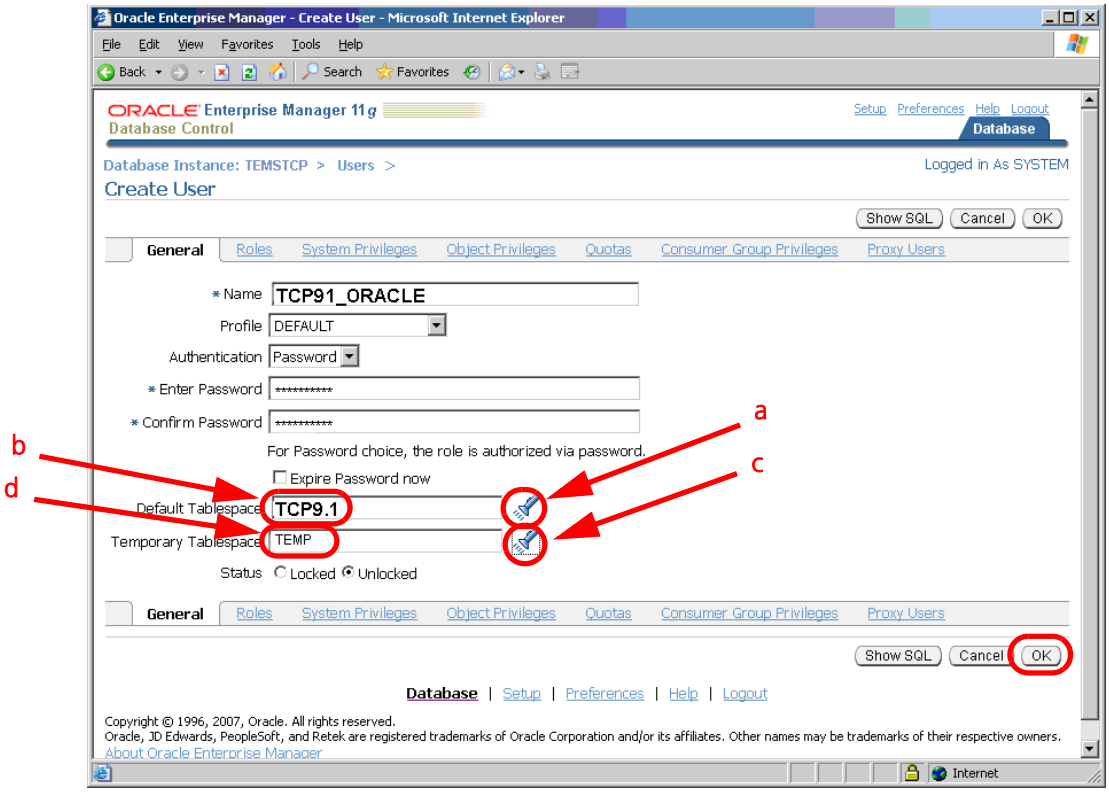

Oracle Enterprise Manager - Create User - Microsoft Internet Explorer
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Users >
Logged in As SYSTEM
Create User
Show SQL Cancel OK
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
* Name
Profile DEFAULT
Authentication Password
* Enter Password
* Confirm Password
For Password choice, the role is authorized via password.
Expire Password now
Default Tablespace
Temporary Tablespace
Status Locked Unlocked
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager

4. Enter the name and password to be used by the TEMS CellPlanner Enterprise Server at login to the Oracle database. In the example, the name is `TCP91_ORACLE`:


Oracle Enterprise Manager - Create User - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Users >
Logged in As SYSTEM
Create User
Show SQL Cancel OK
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
* Name TCP91_ORACLE
Profile DEFAULT
Authentication Password
* Enter Password **********
* Confirm Password **********
For Password choice, the role is authorized via password.
Expire Password now
Default Tablespace
Temporary Tablespace
Status Locked Unlocked
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
Show SQL Cancel OK
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

Note: *It is recommended to create a new user for each version of TEMS CellPlanner Enterprise Server that will log onto the Oracle database.*

5. Associate the new user with default and temporary tablespaces, as in the following example:.



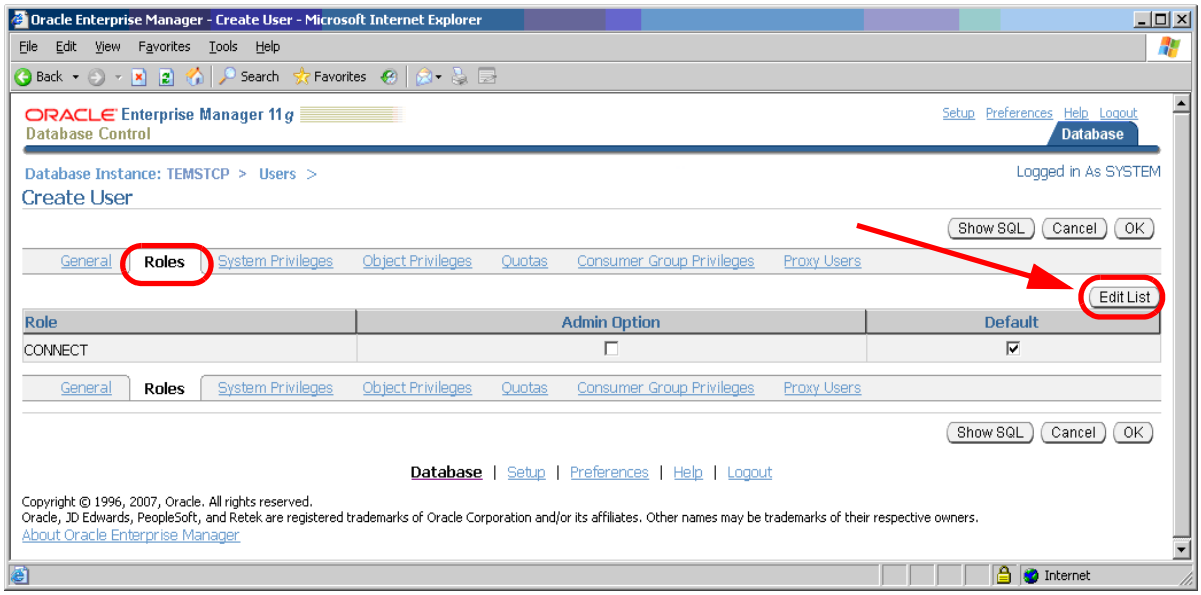
a. Click on the torch to the right of the Default Tablespace entry. A **Search and Select: Tablespace** window is displayed.

b. Highlight the desired tablespace from the list, in our example `TCP9.1`, and click **Select**.

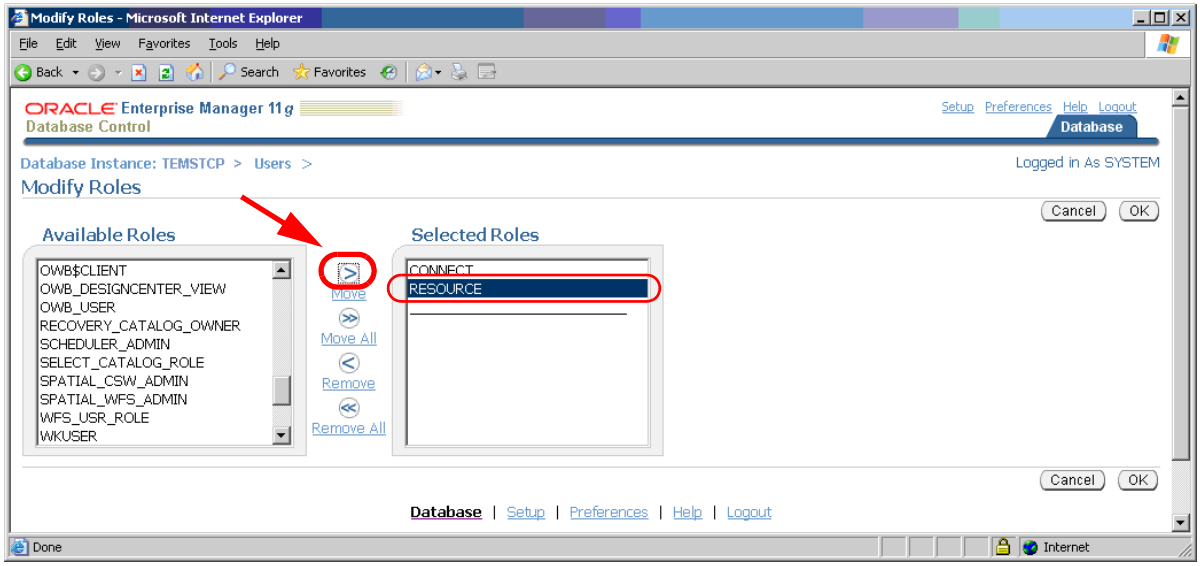
c. Click on the torch to the right of the Temporary Tablespace entry. A **Search and Select: Tablespace** window is displayed.

d. Highlight `TEMP` from the list and click **Select**.

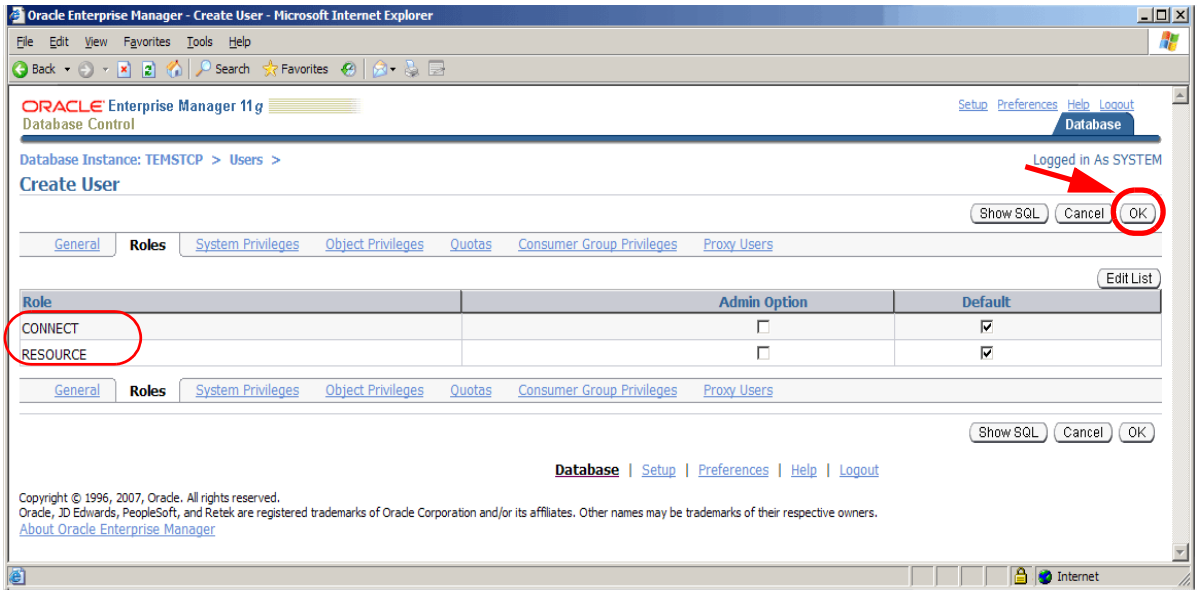
5. Click **OK** to return to the **Create User** window. Select the **Roles** tab. The window then looks as follows:


Oracle Enterprise Manager - Create User - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Users >
Logged in As SYSTEM
Create User
Show SQL Cancel OK
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
Edit List
Role
Admin Option
Default
CONNECT
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
Show SQL Cancel OK
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

6. Click **Edit List**. The **Modify Roles** window appears. Highlight **RESOURCE** in the **Available Roles** list and click the **>** arrow to move it to the **Selected Roles** list. The window then looks as follows:



7. Click **OK** to return to the **Create User** window. The new user with role RESOURCE is now visible in the list of roles:


Oracle Enterprise Manager - Create User - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TEMSTCP > Users >
Logged in As SYSTEM
Create User
Show SQL Cancel OK
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
Edit List
Role
Admin Option
Default
CONNECT
RESOURCE
General Roles System Privileges Object Privileges Quotas Consumer Group Privileges Proxy Users
Show SQL Cancel OK
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

8. Click **OK** to exit. The Oracle user for the TEMS CellPlanner Enterprise Server version is created and associated with the dedicated tablespace.
9. Record the user name and password for future access.

Proceed with Installing Enterprise Server on page 11-1.

10.5 View Listener Port Number

When you Install and Create the Database a port is assigned for access to the database instance. The first database instance is by default assigned port number 1521. A second database instance gets port number 1522, and so on.

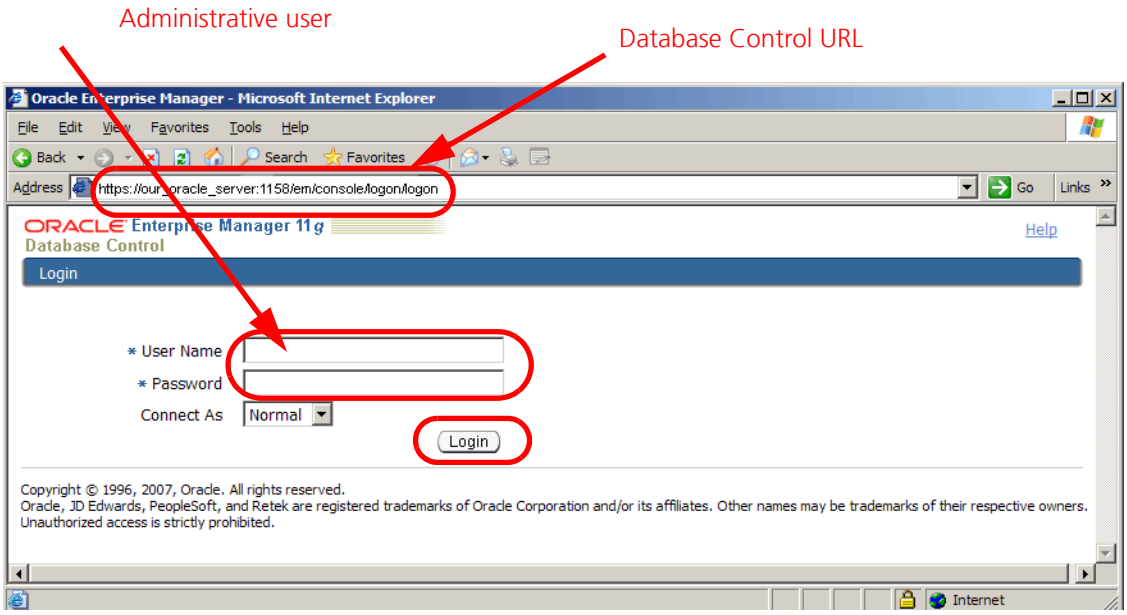
This procedure describes how to view the port number of the TEMS CellPlanner database instance.

Prerequisites

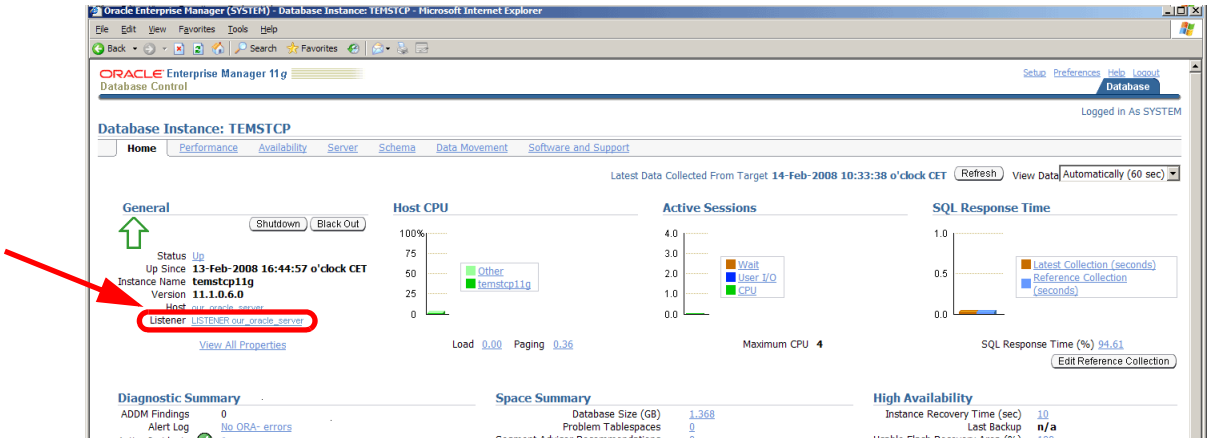
- You must have administrator privileges on the Oracle database server
- You have created a TEMS CellPlanner database instance as described in Install and Create the Database on page 10-5.

Procedure

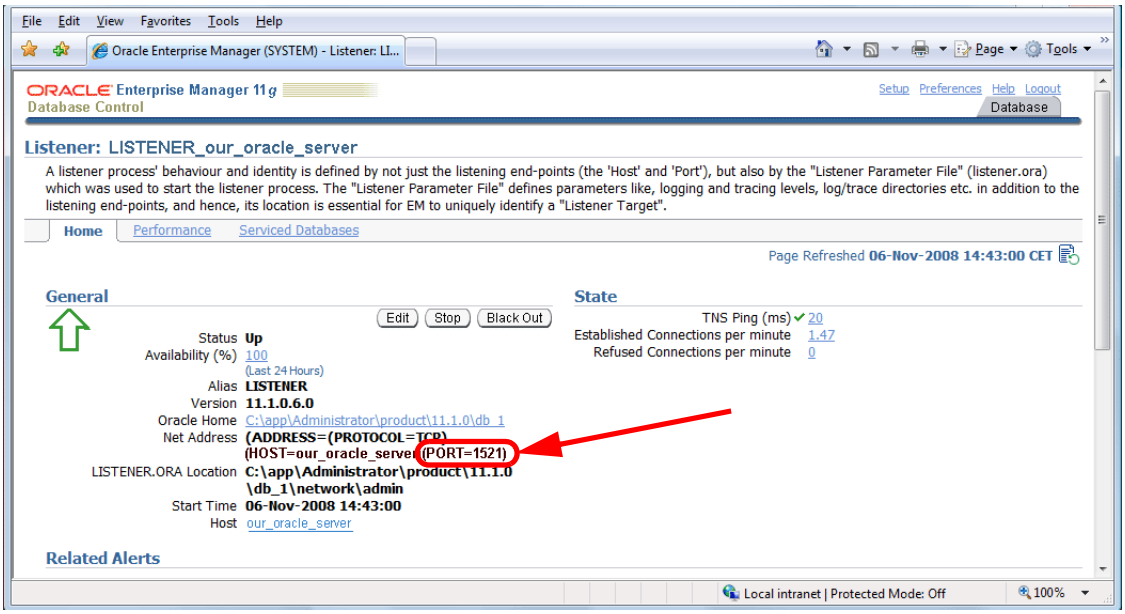
1. Login to the Oracle database as an administrative user, as in the following example:


Administrative user
Database Control URL
Oracle Enterprise Manager - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address https://our_oracle_server:1158/em/console/logon/logon
Go Links
ORACLE Enterprise Manager 11g
Database Control
Help
Login
* User Name
* Password
Connect As
Normal
Login
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
Unauthorized access is strictly prohibited.
Internet

2. The **Database Instance Home** page appears as in the following example:



3. Click on the link to the **Listener** of the TEMS CellPlanner database instance. The **Listener** window appears as in the following example:


File Edit View Favorites Tools Help
Oracle Enterprise Manager (SYSTEM) - Listener: LI...
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Listener: LISTENER_our_oracle_server
A listener process' behaviour and identity is defined by not just the listening end-points (the 'Host' and 'Port'), but also by the "Listener Parameter File" (listener.ora) which was used to start the listener process. The "Listener Parameter File" defines parameters like, logging and tracing levels, log/trace directories etc. in addition to the listening end-points, and hence, its location is essential for EM to uniquely identify a "Listener Target".
Home
Performance
Serviced Databases
Page Refreshed 06-Nov-2008 14:43:00 CET
General
Edit
Stop
Black Out
Status Up
Availability (%) 100
(Last 24 Hours)
Alias LISTENER
Version 11.1.0.6.0
Oracle Home C:\app\Administrator\product\11.1.0\db_1
Net Address (ADDRESS=(PROTOCOL=TCP)
(HOST=our_oracle_server (PORT=1521)
LISTENER.ORA Location C:\app\Administrator\product\11.1.0
\db_1\network\admin
Start Time 06-Nov-2008 14:43:00
Host our_oracle_server
State
TNS Ping (ms) 20
Established Connections per minute 1.47
Refused Connections per minute 0
Related Alerts
Local intranet | Protected Mode: Off
100%

4. The port number of the TEMS CellPlanner database instance is indicated in the marked area.

10.6 Oracle Database Administration

This chapter describes the most important administrative operations after the database is installed and ready to use by TEMS CellPlanner.

Read more about how to administer an Oracle database in the *Oracle manuals*.

10.6.1 Back Up Oracle Database

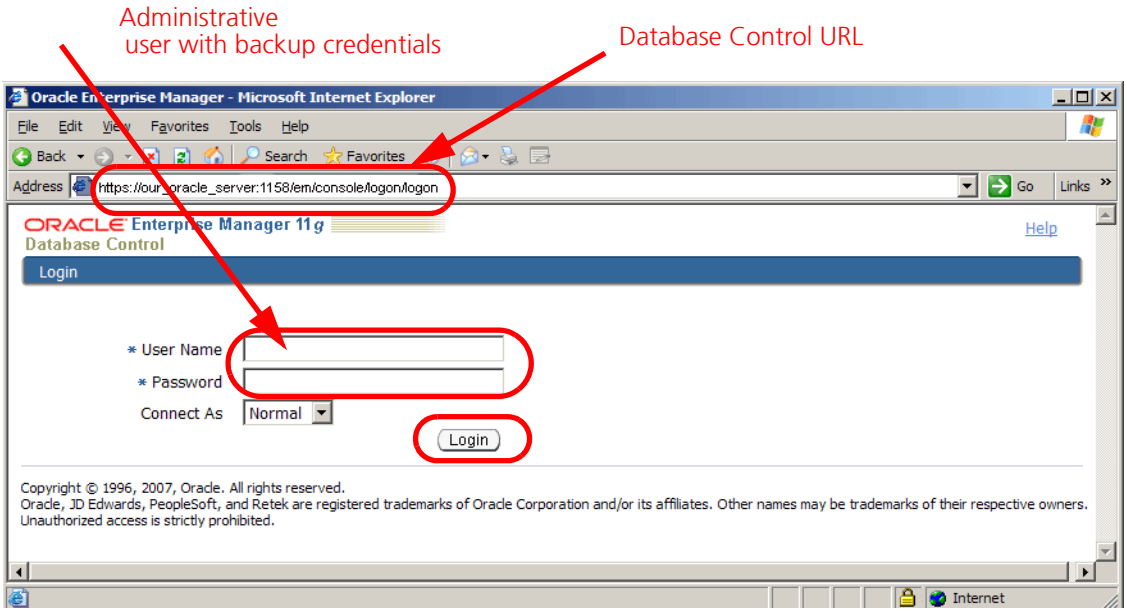
You should back up the TEMS CellPlanner database in Oracle on a regular basis. This procedure describes the simplest back up choices. For a complete description about all back up options, see the *Oracle manuals*.

Prerequisites

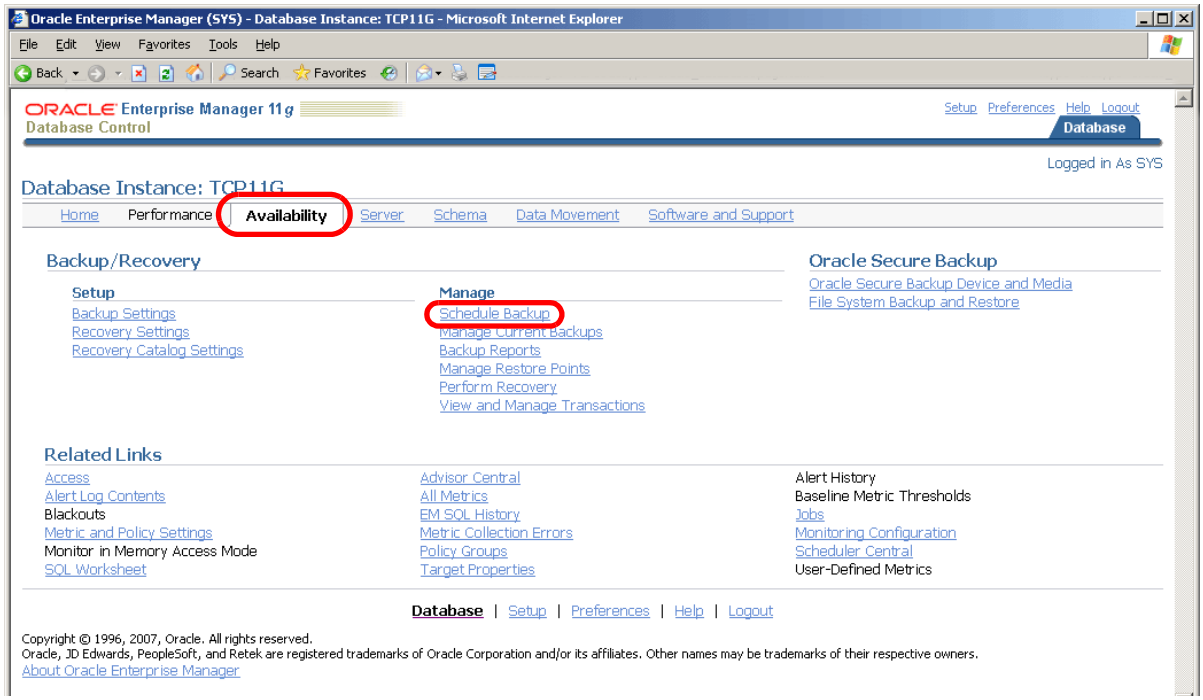
- You must have administrator privileges on the Oracle database server.
- Automated backups are enabled and a physical storage area selected, see Step 12 in Install and Create the Database.
- The administrative user with backup credentials is assigned and is allowed to log on as a batch job, see Step 14 in Install and Create the Database.

Procedure

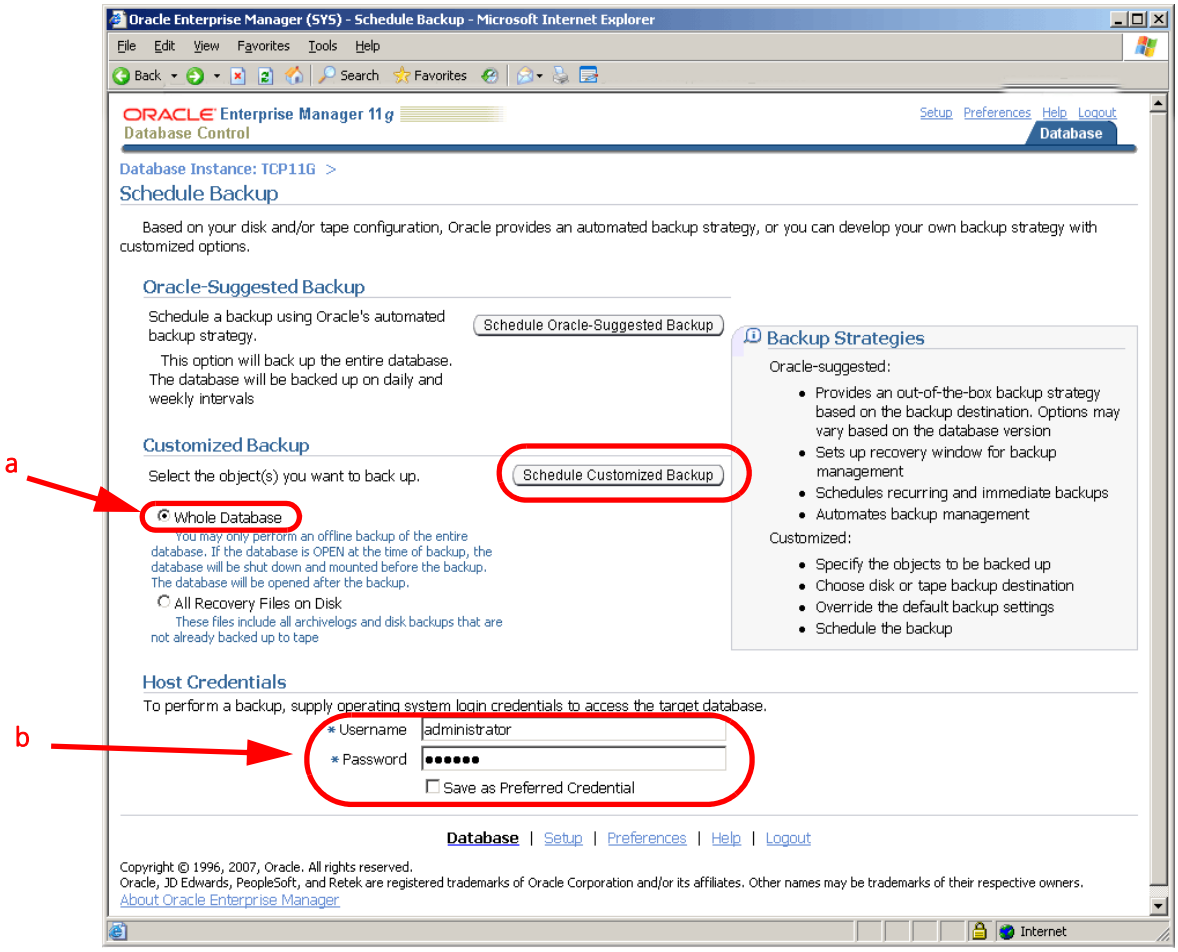
1. Login to the Oracle database as an administrative user with backup credentials, as in the following example:


Administrative
user with backup credentials
Database Control URL
Oracle Enterprise Manager - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address https://our_oracle_server:1158/em/console/logon/logon
Go Links
ORACLE Enterprise Manager 11g
Database Control
Help
Login
* User Name
* Password
Connect As
Normal
Login
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
Unauthorized access is strictly prohibited.
Internet

2. In the **Database Instance** window, select the **Availability** tab. Locate the **Manage** area and select **Schedule Backup** as in the following example:



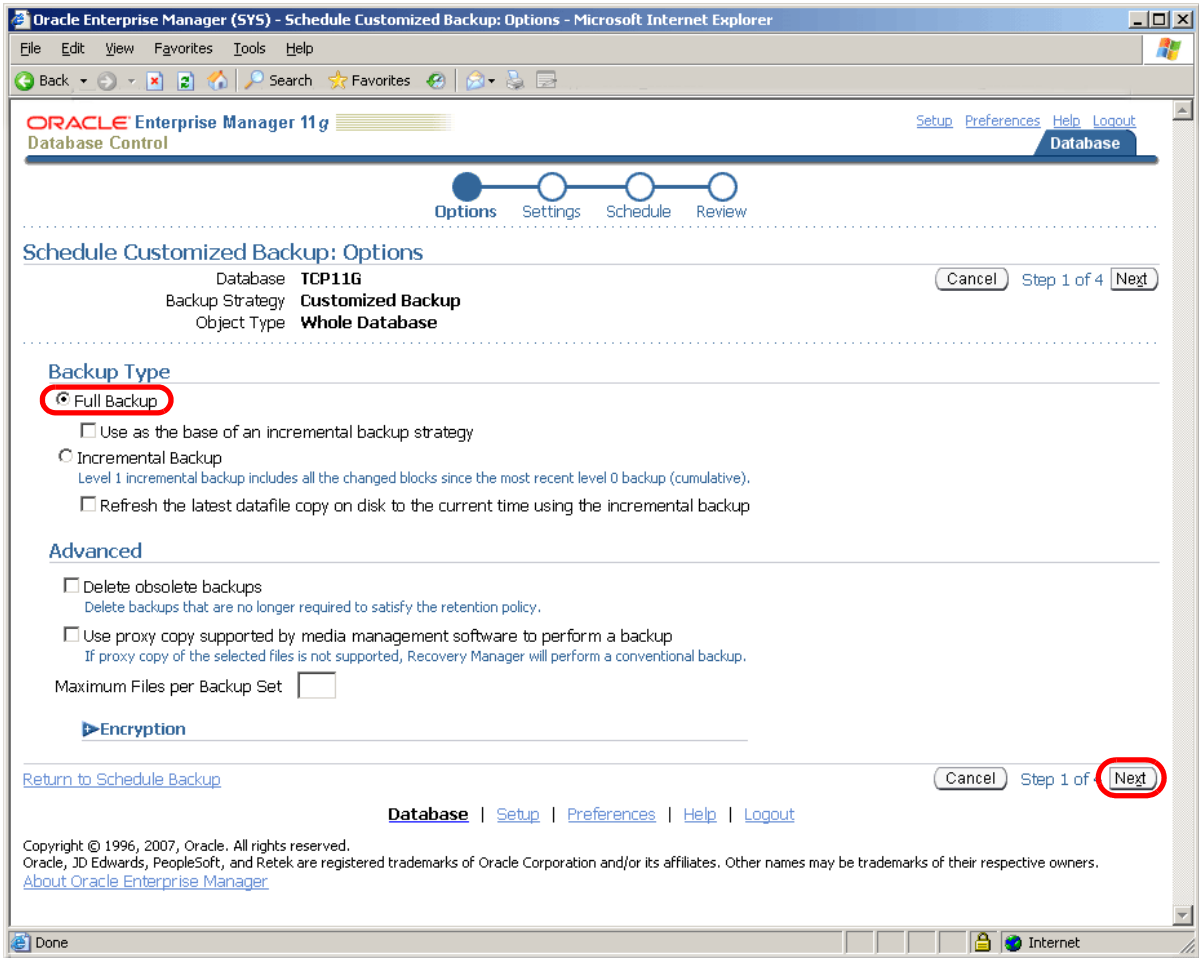
3. The **Schedule Backup** window appears. Schedule the backup as in the example below:


Oracle Enterprise Manager (SYS) - Schedule Backup - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Database Instance: TCP11G >
Schedule Backup
Based on your disk and/or tape configuration, Oracle provides an automated backup strategy, or you can develop your own backup strategy with customized options.
Oracle-Suggested Backup
Schedule a backup using Oracle's automated backup strategy.
This option will back up the entire database. The database will be backed up on daily and weekly intervals
Schedule Oracle-Suggested Backup
Backup Strategies
Oracle-suggested:
Provides an out-of-the-box backup strategy based on the backup destination. Options may vary based on the database version
Sets up recovery window for backup management
Schedules recurring and immediate backups
Automates backup management
Customized:
Specify the objects to be backed up
Choose disk or tape backup destination
Override the default backup settings
Schedule the backup
Customized Backup
Select the object(s) you want to back up.
Schedule Customized Backup
a
Whole Database
You may only perform an offline backup of the entire database. If the database is OPEN at the time of backup, the database will be shut down and mounted before the backup. The database will be opened after the backup.
All Recovery Files on Disk
These files include all archivelogs and disk backups that are not already backed up to tape
Host Credentials
To perform a backup, supply operating system login credentials to access the target database.
b
* Username administrator
* Password
Save as Preferred Credential
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

a. Select **Customized backup** with option **Whole database**. Alternative choices are possible, but this is the only choice used in the example.

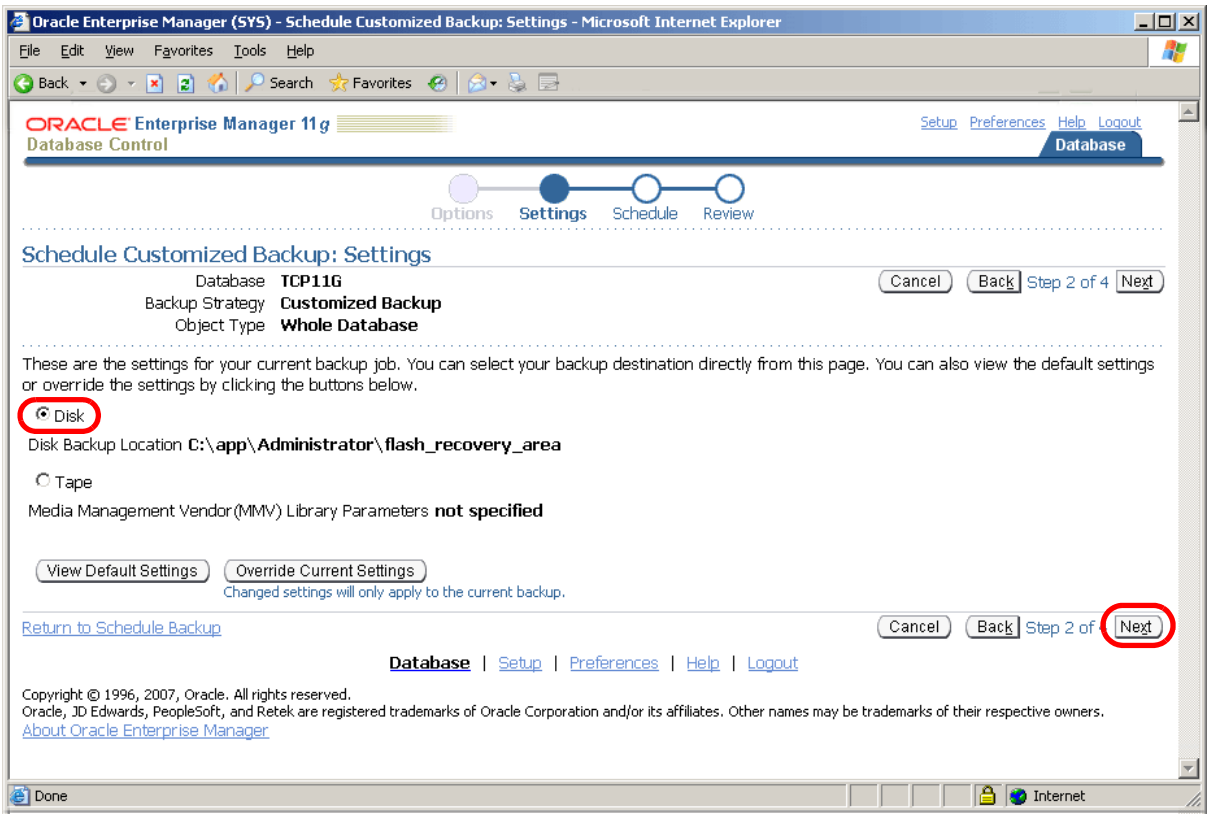
b. In the **Host Credentials** area, enter user name and password of a Windows user with administrative privileges and allowed to log on as batch job on the database server.

3. Select **Schedule Customized Backup**. The **Options** window appears as in the following example:


Oracle Enterprise Manager (SYS) - Schedule Customized Backup: Options - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Options Settings Schedule Review
Schedule Customized Backup: Options
Database TCP11G
Backup Strategy Customized Backup
Object Type Whole Database
Cancel Step 1 of 4 Next
Backup Type
Full Backup
Use as the base of an incremental backup strategy
Incremental Backup
Level 1 incremental backup includes all the changed blocks since the most recent level 0 backup (cumulative).
Refresh the latest datafile copy on disk to the current time using the incremental backup
Advanced
Delete obsolete backups
Delete backups that are no longer required to satisfy the retention policy.
Use proxy copy supported by media management software to perform a backup
If proxy copy of the selected files is not supported, Recovery Manager will perform a conventional backup.
Maximum Files per Backup Set
Encryption
Return to Schedule Backup
Cancel Step 1 of 4 Next
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Done
Internet

4. Select **Full backup** (default). Alternative choices are possible, but this is the only choice used in the example.

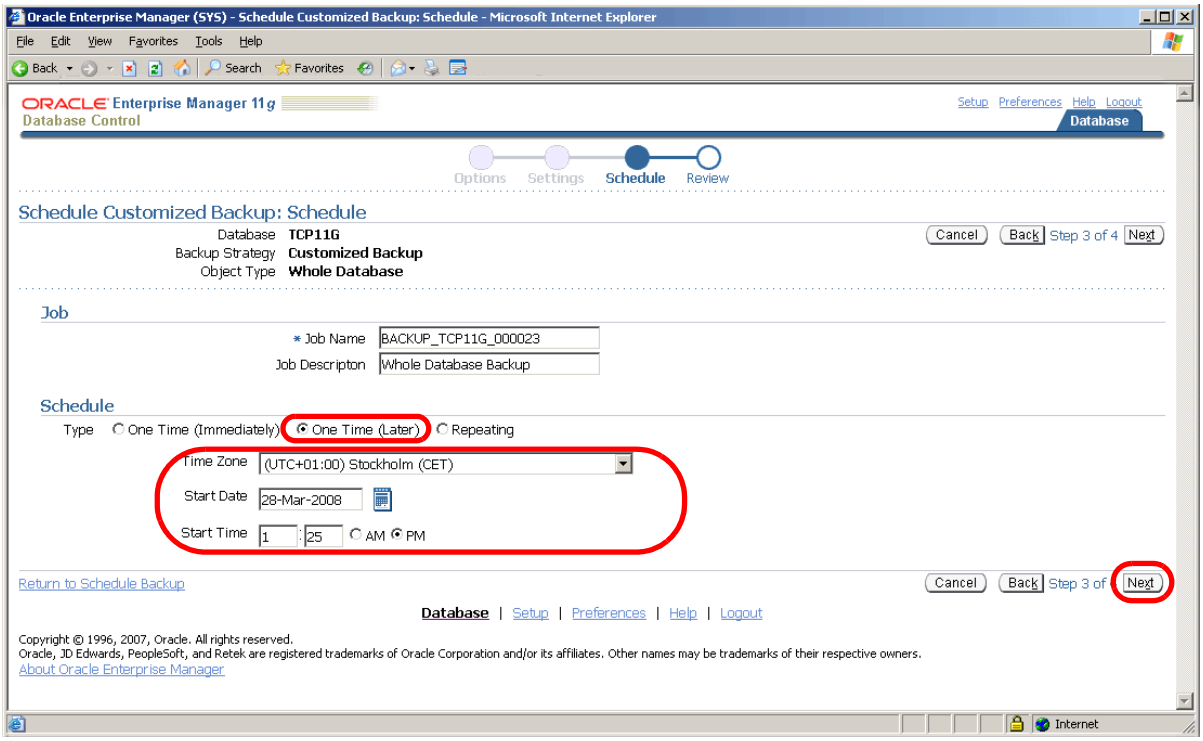
5. Click **Next**. The **Settings** window appears as in the following example:


Oracle Enterprise Manager (SYS) - Schedule Customized Backup: Settings - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Options Settings Schedule Review
Schedule Customized Backup: Settings
Database TCP11G
Backup Strategy Customized Backup
Object Type Whole Database
Cancel Back Step 2 of 4 Next
These are the settings for your current backup job. You can select your backup destination directly from this page. You can also view the default settings or override the settings by clicking the buttons below.
Disk
Disk Backup Location C:\app\Administrator\flash_recovery_area
Tape
Media Management Vendor(MMV) Library Parameters not specified
View Default Settings
Override Current Settings
Changed settings will only apply to the current backup.
Return to Schedule Backup
Cancel Back Step 2 of 4 Next
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Done
Internet

6. Select disk or tape as target media of the backup.

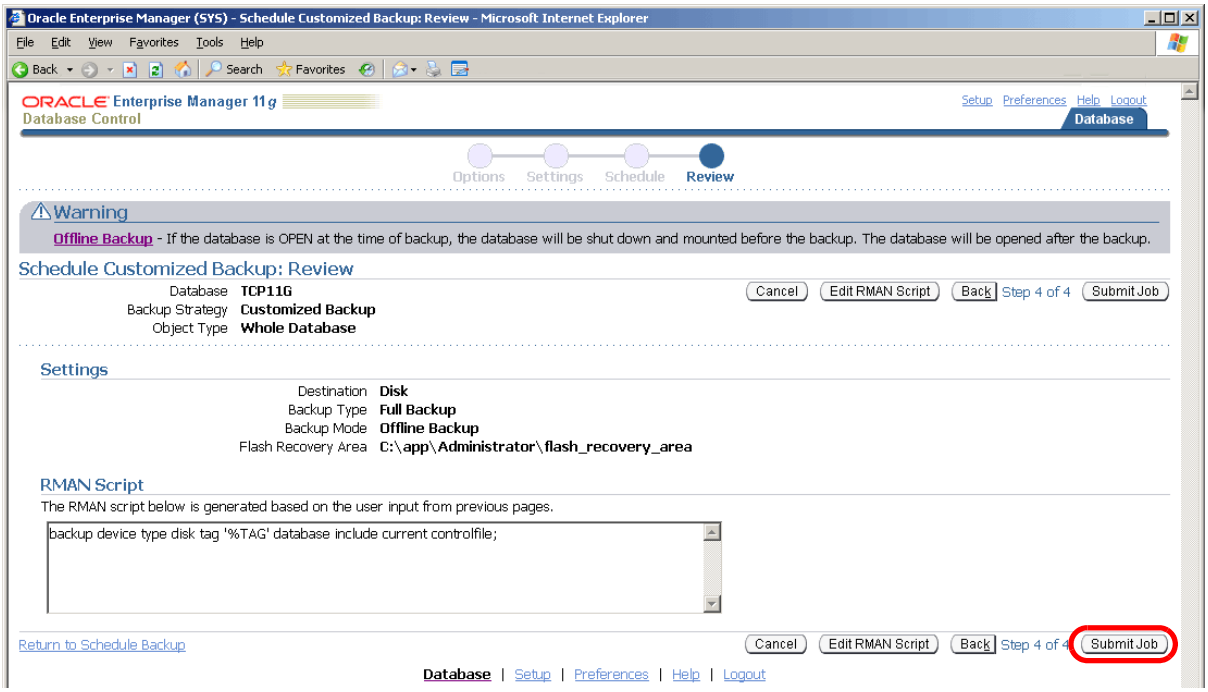
   The physical location of the storage area was selected in Step 12 in Install and Create the Database.

7. Click **Next**. The **Schedule** window appears:

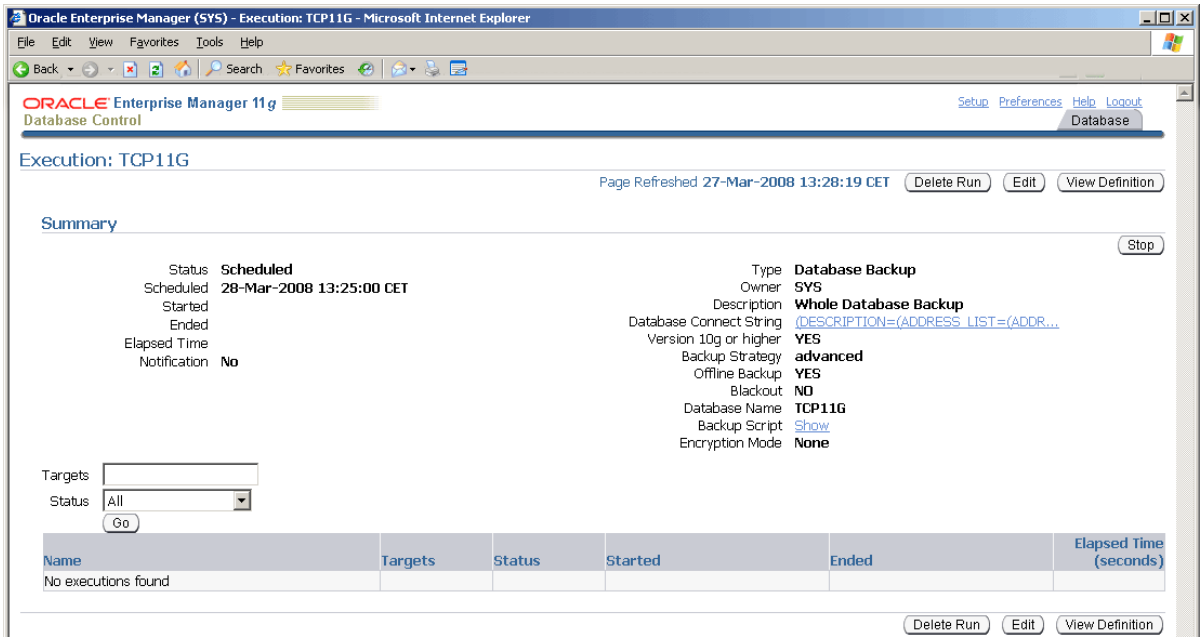

Oracle Enterprise Manager (SYS) - Schedule Customized Backup: Schedule - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Options Settings Schedule Review
Schedule Customized Backup: Schedule
Cancel Back Step 3 of 4 Next
Database TCP11G
Backup Strategy Customized Backup
Object Type Whole Database
Job
* Job Name BACKUP_TCP11G_000023
Job Descripton Whole Database Backup
Schedule
Type One Time (Immediately) One Time (Later) Repeating
Time Zone (UTC+01:00) Stockholm (CET)
Start Date 28-Mar-2008
Start Time 1 : 25 AM PM
Return to Schedule Backup
Cancel Back Step 3 of Next
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
About Oracle Enterprise Manager
Internet

8. Schedule to back up once (immediately or later) or repeating. If you select any other choice than immediately, you must enter complementing scheduling parameters.

9. Click **Next**. The **Review** window appears:


Oracle Enterprise Manager (SYS) - Schedule Customized Backup: Review - Microsoft Internet Explorer
ORACLE Enterprise Manager 11g
Database Control
Setup Preferences Help Logout
Database
Options Settings Schedule Review
Warning
Offline Backup - If the database is OPEN at the time of backup, the database will be shut down and mounted before the backup. The database will be opened after the backup.
Schedule Customized Backup: Review
Cancel Edit RMAN Script Back Step 4 of 4 Submit Job
Database TCP11G
Backup Strategy Customized Backup
Object Type Whole Database
Settings
Destination Disk
Backup Type Full Backup
Backup Mode Offline Backup
Flash Recovery Area C:\app\Administrator\flash_recovery_area
RMAN Script
The RMAN script below is generated based on the user input from previous pages.
backup device type disk tag '%TAG' database include current controlfile;
Return to Schedule Backup
Cancel Edit RMAN Script Back Step 4 of 4 Submit Job
Database | Setup | Preferences | Help | Logout

10. Check that the settings are correct and click **Submit Job**. Depending on your schedule options, the backup starts immediately or is scheduled to start later. The **Execution** window appears:



In this example, the backup is scheduled to run later, therefore the list in the lower part of the window tells “No executions found”.

10.6.2 Restore Database from Backup

You can restore the TEMS CellPlanner database in Oracle from a backup file.

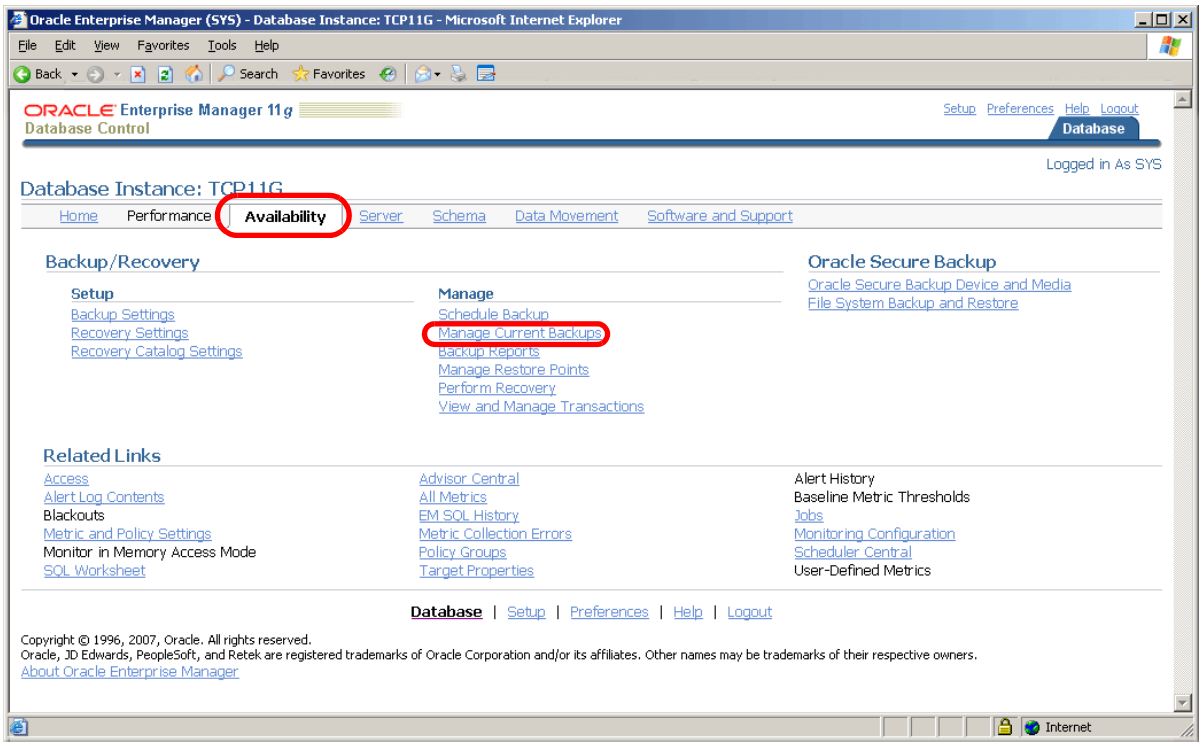
This chapter exemplifies the initial steps before initiating a recovery. Refer to the *Oracle manuals* to read about all options and how to complete the recovery.

Prerequisites

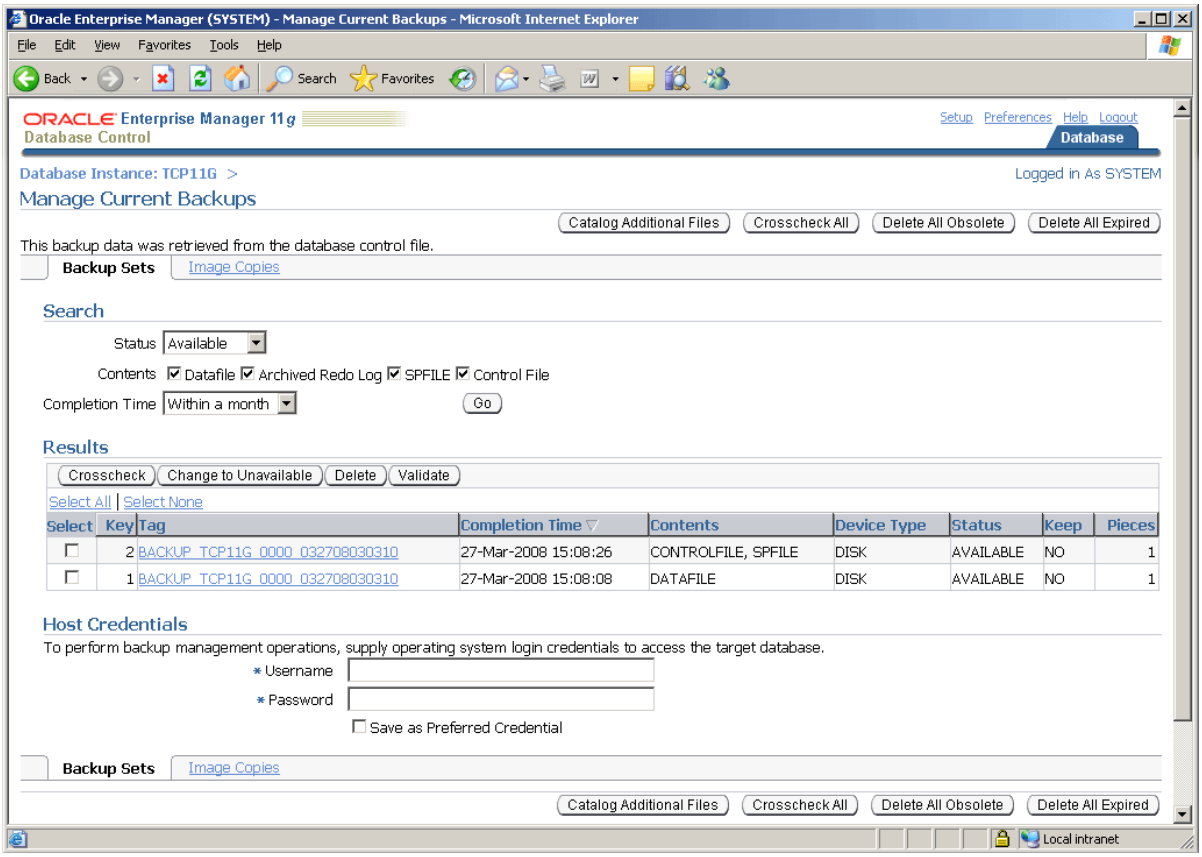
- You must have administrator privileges on the Oracle database server.
- The administrative user with backup credentials is assigned, see Step 14 in Install and Create the Database.
- The backup is available.

Procedure

1. Login to the Oracle database as an administrative user with backup credentials, as described in Back Up Oracle Database.
2. In the **Database Instance** window, select the **Availability** tab. Locate the **Manage** area and select **Manage Current Backups** as in the following example:

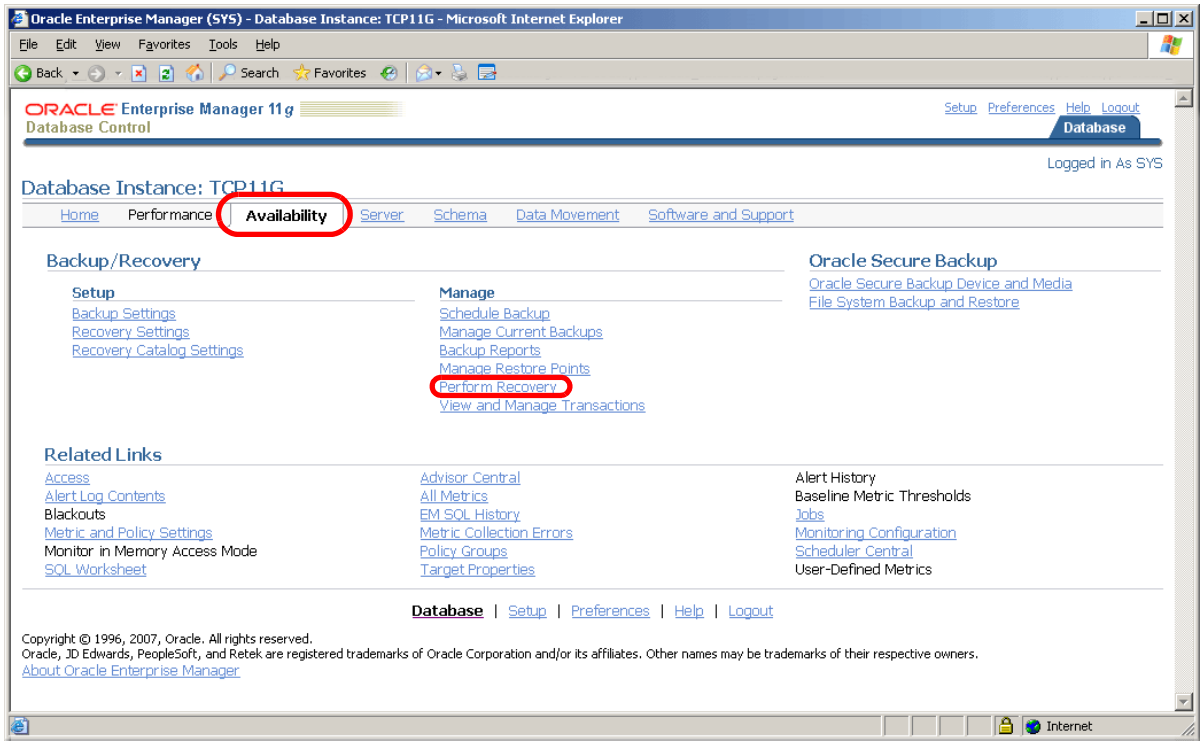


3. The **Manage Current Backups** windows displays the available backups, as in the following example:

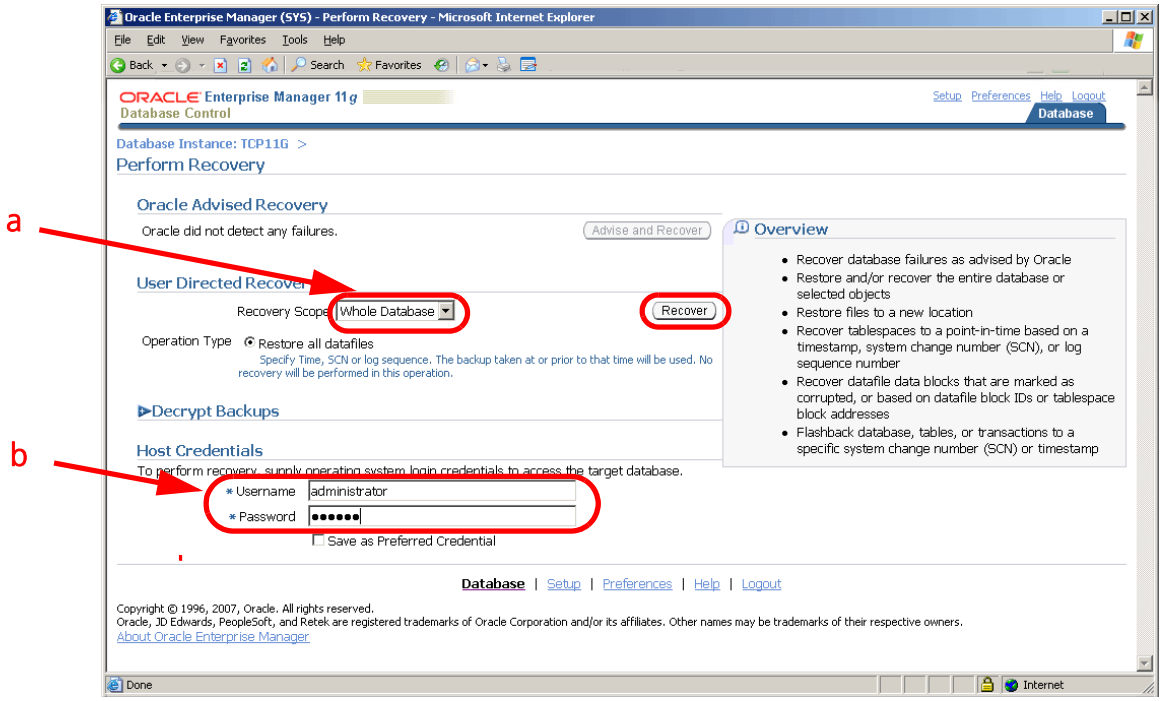


4. Locate the backup you want to recover from and record the completion time. You need this information at a later stage when selecting date and time for the backup to recover from.

5. In the **Database Instance** window, select the **Availability** tab. Locate the **Manage** area and select **Perform Recovery** as in the following example:



6. The **Perform Recovery** window appears. Select recovery options as in the example below:


a
b
Oracle Enterprise Manager (SYS) - Perform Recovery - Microsoft Internet Explorer
ORACLE Enterprise Manager 11g
Database Control
Database Instance: TCP11G >
Perform Recovery
Oracle Advised Recovery
Oracle did not detect any failures.
Advise and Recover
User Directed Recovery
Recovery Scope
Whole Database
Recover
Operation Type
Restore all datafiles
Specify Time, SCN or log sequence. The backup taken at or prior to that time will be used. No recovery will be performed in this operation.
Decrypt Backups
Host Credentials
To perform recovery, supply operating system login credentials to access the target database.
* Username
administrator
* Password
Save as Preferred Credential
Overview
Recover database failures as advised by Oracle
Restore and/or recover the entire database or selected objects
Restore files to a new location
Recover tablespaces to a point-in-time based on a timestamp, system change number (SCN), or log sequence number
Recover datafile data blocks that are marked as corrupted, or based on datafile block IDs or tablespace block addresses
Flashback database, tables, or transactions to a specific system change number (SCN) or timestamp
Database | Setup | Preferences | Help | Logout
Copyright © 1996, 2007, Oracle. All rights reserved.
About Oracle Enterprise Manager

   a. Select recovery scope, in the example **Whole database**.

   b. In the **Host Credentials** area, enter user name and password of a Windows user with administrative privileges and backup credentials on the database server.

3. Click **Recover**.

The rest of the procedure depends on mode settings, which backup to restore, how to restore it and so on.

Refer to the *Oracle manuals* for information on how to complete the recovery.

10.6.3 Increase Performance

The performance of the TEMS CellPlanner database operations depends on the memory settings in Oracle. The time to load workspace from server, store workspace in server, publish workspace and other database accessing operations may decrease significantly with optimized memory settings.

You monitor and tune the memory consumption from the **Memory Advisors** window. Open this window by logging in to the Oracle database, opening the **Server** menu and selecting **Memory Advisors** in the **Database Configuration** area. See Create TEMS CellPlanner Tablespace on page 10-16 about how to login and open the **Server** menu.

When selecting the **SGA** tab or the **PGA** tab, the upper half of the window shows the memory size of the System Global Area or the Program Global Area respectively. Monitor the memory consumption by opening a memory history graph from the **Advice** button.

By modifying the value of **Total Memory Size** you change the performance for database accessing operations.

Refer to the *Oracle manuals* for more detailed descriptions about memory settings.

11
Installing Enterprise Server

This chapter describes how to install the TEMS CellPlanner Enterprise Server software.

Topics **Page**

About the Enterprise Server 11-2
How to Install Enterprise Server 11-2
Prepare Installation of Enterprise Server 11-2
Export Projects and Account Information 11-3
Create Tablespace in Oracle Database 11-3
Create Oracle User for TEMS CellPlanner 11-4
Stop Enterprise Server 11-4
A: Stop Enterprise Server as a Windows Service 11-4
B: Stop Enterprise Server as an Ordinary Process 11-5
Install Enterprise Server 11-7
Configure Oracle Connection Parameters 11-13
Initiate Database Tables and Create ADMIN User 11-15
Start Enterprise Server 11-17
A: Start Enterprise Server as a Windows Service 11-17
B: Start Enterprise Server as an Ordinary Process 11-18
View JBoss JMX Attributes (Optional) 11-20
Configure Connection Data and Change Password 11-23
Import Projects and Account Information 11-28
Cancel Installation 11-28

11.1 About the Enterprise Server

The TEMS CellPlanner Enterprise Server is a software managing the connections, data transfer and conflict resolution between TEMS CellPlanner Clients and an Oracle database with shared TEMS CellPlanner projects.

The Enterprise Server must be of the same version as the TEMS CellPlanner clients in the network.

For more information on the TEMS CellPlanner Enterprise Server, see TEMS CellPlanner Servers for Shared Projects on page 9-3.

11.2 How to Install Enterprise Server

Follow this process to install and setup Enterprise Server version 9.1:

1. Prepare Installation of Enterprise Server
2. At upgrade: Export Projects and Account Information
3. Create Tablespace in Oracle Database
4. Create Oracle User for TEMS CellPlanner
5. At upgrade: Stop Enterprise Server
6. Install Enterprise Server
7. Configure Oracle Connection Parameters
8. Initiate Database Tables and Create ADMIN User
9. Start Enterprise Server
10. View JBoss JMX Attributes (Optional)
11. Configure Connection Data and Change Password
12. At upgrade: Import Projects and Account Information

11.3 Prepare Installation of Enterprise Server

Read the information in this section before you install the Enterprise Server.

11.3.1 Compatible Enterprise Server and Clients Required

Ensure that the Enterprise Server to install is of the same software version as the TEMS CellPlanner Clients that will access shared projects via the Enterprise Server.

The Enterprise Server and TEMS CellPlanner Clients can only exchange project data if they are compatible. To prevent incompatibility, only TEMS CellPlanner Clients of the same version as the Enterprise Server are allowed to login to the Enterprise Server and access projects in the database.

11.3.2 Prepare Configuration Data

You need at hand the configuration data described in Oracle Database Data to Record on page 10-3.

11.4 Export Projects and Account Information

If you want to reuse projects and accounts in database, you have to migrate the projects and accounts before upgrading to a new Enterprise Server version.

You may also migrate projects and accounts from a Zero Admin Server to move them to an Enterprise Server.

A complete migration includes export of projects to XML files and import of the XML files and re-creation of projects. At this stage you export the projects to XML files. You may also export the account information of the exported projects. You will later import the XML files after installation of the new version of Enterprise Server.

To export projects from the database, possibly together with the account information in the Enterprise Server, follow the instructions **up to and including Export Projects from...** in Migrate Database (DB) to TEMS CellPlanner 9.1.

Proceed with Create Tablespace in Oracle Database.

11.5 Create Tablespace in Oracle Database

You shall create a tablespace for TEMS CellPlanner 9.1 in the Oracle database. The *tablespace* is a database area where TEMS CellPlanner 9. projects will be stored as database tables.

Note: *Each TEMS CellPlanner version needs its own tablespace.*

Follow the instructions in Create TEMS CellPlanner Tablespace on page 10-16 to create the tablespace, then proceed with Create Oracle User for TEMS CellPlanner.

11.6 Create Oracle User for TEMS CellPlanner

After Create Tablespace in Oracle Database, you shall create an *Oracle user* associated with the newly created tablespace. The Enterprise Server program will login to the Oracle database as this user, and get access to the tablespace associated with the user.

Note: *You should always create a dedicated Oracle user for each TEMS CellPlanner version to reduce the risk of accidently overwriting tablespaces belonging to older TEMS CellPlanner versions.*

Follow the instructions in Create Oracle User for Enterprise Server. on page 10-26 to create the Oracle user.

If you are upgrading, proceed with Stop Enterprise Server, else proceed with Install Enterprise Server.

11.7 Stop Enterprise Server

Before Install Enterprise Server or Uninstalling TEMS CellPlanner Components any running Enterprise Server must be stopped to prevent project updates during upgrade.

Use one of the below procedures at upgrade from an existing version of TEMS CellPlanner Enterprise Server, or to temporarily stop access to the Enterprise Server for any other reason. Which procedure to choose depends on how the Enterprise Server was started.

Caution: Use this procedure with caution as any interaction with TEMS CellPlanner Clients, TEMS CellPlanner User Administration and Oracle database will stop immediately and project data might be lost.

11.7.1 A: Stop Enterprise Server as a Windows Service

If you have started the Enterprise Server as a Windows service, see A: Start Enterprise Server as a Windows Service on page 11-17, do as follows to stop the service:

1. Open the **Control Panel.**
2. Select **Administrative Tools.**
3. Select the **Services** tab. The **Services** window is opened.
4. In the **Services** window, the name of the service appears on a separate row. The name of the service depends on its TEMS CellPlanner version:

- **TCPServer** for TEMS CellPlanner 8.0
- **JBoss TCP Server** for TEMS CellPlanner 8.1 and later

5. Stop the service as follows, depending on its TEMS CellPlanner version:

   a. Select **TCPServer** (or **JBoss TCP Server**) and click the **Stop** button or choice, depending on the operating system.

   b. Right-click on **TCPServer** (or **JBoss TCP Server**) and select **Stop**.

   The status column indicates that the service is stopped.

To remove the current TEMS CellPlanner Enterprise Server as a Windows service - mandatory at upgrade of TEMS CellPlanner - do as follows:

1. Open the **Control Panel.**
2. Select **Administrative Tools.**
3. Select the **Services** tab. The **Services** window is opened.
4. In the **Services** window, the name of the service appears on a separate row. The name of the service depends on which TEMS CellPlanner version it belongs:
   - **TCPServer** for TEMS CellPlanner 8.0
   - **JBoss TCP Server** for TEMS CellPlanner 8.1 and later
5. Select **Start↗Run**.
6. To uninstall the service, run the uninstall script. The script path and name depend son the version of the software package, as the server names and installation handling has changed between product releases:

Server name and version	Uninstall script
TEMS CellPlanner Server 8.0	`C:\<Program Files>\TEMS Products\TEMS CellPlanner 8.0.y\Server\TCPServer_Uninstall.bat`
TEMS CellPlanner Server 8.1	`C:\TCPJBoss\bin\uninstallwrapper.bat`
TEMS CellPlanner Enterprise Server 9.0	`C:\TCPJBoss\9.0.0\bin\uninstallwrapper.bat`
TEMS CellPlanner Enterprise Server 9.1	`C:\TCPJBoss\9.1.0\bin\uninstallwrapper.bat`

7. Select **Action↗Refresh** in the **Services** window to verify that the **TCPServer** (or **JBoss TCP Server**) has disappeared as a service.

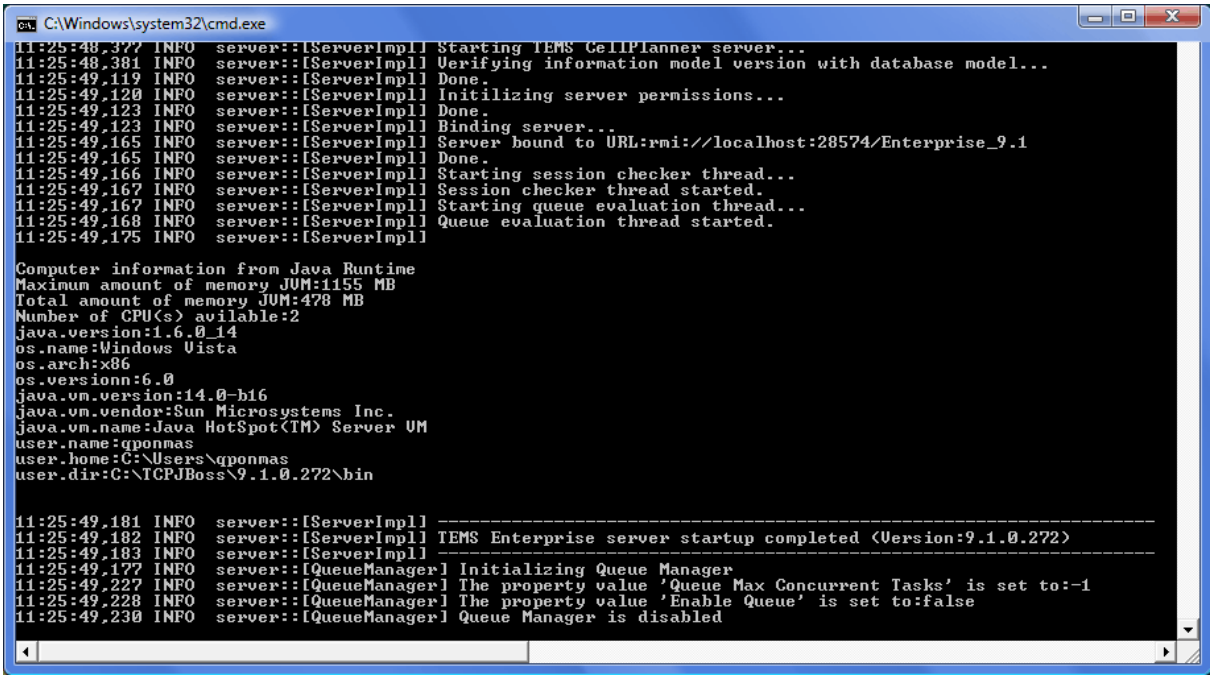
If you are upgrading, proceed with Install Enterprise Server.

11.7.2 B: Stop Enterprise Server as an Ordinary Process

If you have started the TEMS CellPlanner Enterprise Server as an ordinary process, do as follows to stop the process:

1. Ensure that no TEMS CellPlanner Client nor TEMS CellPlanner User Administration tool is working towards the Enterprise Server.

2. Close the window previously opened from B: Start Enterprise Server as an Ordinary Process. The window looks as in the example below:


C:\Windows\system32\cmd.exe
11:25:48,377 INFO server::[ServerImpl] Starting TEMS CellPlanner server...
11:25:48,381 INFO server::[ServerImpl] Verifying information model version with database model...
11:25:49,119 INFO server::[ServerImpl] Done.
11:25:49,120 INFO server::[ServerImpl] Initilizing server permissions...
11:25:49,123 INFO server::[ServerImpl] Done.
11:25:49,123 INFO server::[ServerImpl] Binding server...
11:25:49,165 INFO server::[ServerImpl] Server bound to URL:rmi://localhost:28574/Enterprise_9.1
11:25:49,165 INFO server::[ServerImpl] Done.
11:25:49,166 INFO server::[ServerImpl] Starting session checker thread...
11:25:49,167 INFO server::[ServerImpl] Session checker thread started.
11:25:49,167 INFO server::[ServerImpl] Starting queue evaluation thread...
11:25:49,168 INFO server::[ServerImpl] Queue evaluation thread started.
11:25:49,175 INFO server::[ServerImpl]
Computer information from Java Runtime
Maximum amount of memory JVM:1155 MB
Total amount of memory JVM:478 MB
Number of CPU(s) avilable:2
java.version:1.6.0_14
os.name:Windows Vista
os.arch:x86
os.versionn:6.0
java.vm.version:14.0-b16
java.vm.vendor:Sun Microsystems Inc.
java.vm.name:Java HotSpot(TM) Server VM
user.name:qponmas
user.home:C:\Users\qponmas
user.dir:C:\TCPJBoss\9.1.0.272\bin
11:25:49,181 INFO server::[ServerImpl] ----------
11:25:49,182 INFO server::[ServerImpl] TEMS Enterprise server startup completed (Version:9.1.0.272)
11:25:49,183 INFO server::[ServerImpl] ----------
11:25:49,177 INFO server::[QueueManager] Initializing Queue Manager
11:25:49,227 INFO server::[QueueManager] The property value 'Queue Max Concurrent Tasks' is set to:-1
11:25:49,228 INFO server::[QueueManager] The property value 'Enable Queue' is set to:false
11:25:49,230 INFO server::[QueueManager] Queue Manager is disabled

3. The Enterprise Server is stopped, the window disappears and the java.exe process disappears from **Windows Task Manager**.

If you are upgrading, proceed with Install Enterprise Server.

11.8 Install Enterprise Server

Use this procedure to install a new version of TEMS CellPlanner Enterprise Server for the first time, or to upgrade from an older version.

Note: *From TEMS CellPlanner 8.1, a JBoss application server is installed together with the Enterprise Server. No other program using the JBoss application server may be running when using the Enterprise Server.*

Currently the installation script installs one TEMS CellPlanner 9.1 Enterprise Server per host. If you need more Enterprise Servers on the same host, contact TEMS Support.

Prerequisites

- Read Prepare Installation of Enterprise Server.
- You must have administrator privileges on the computer.
- *You must have exported old projects before upgrading the* Enterprise Server*, you will otherwise lose data.* See Export Projects and Account Information on page 11-3.
- No Enterprise Server is running, see Stop Enterprise Server on page 11-4.
- No application using the JBoss application server is running. If you have such applications on your computer, contact TEMS Support for advise.

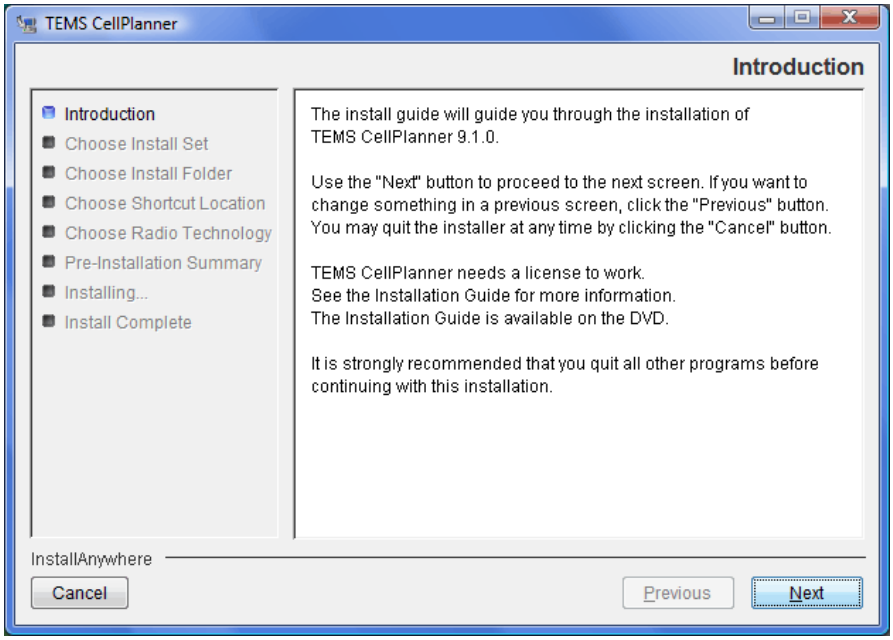
Procedure

1. Start the installation according to how the software is packaged.

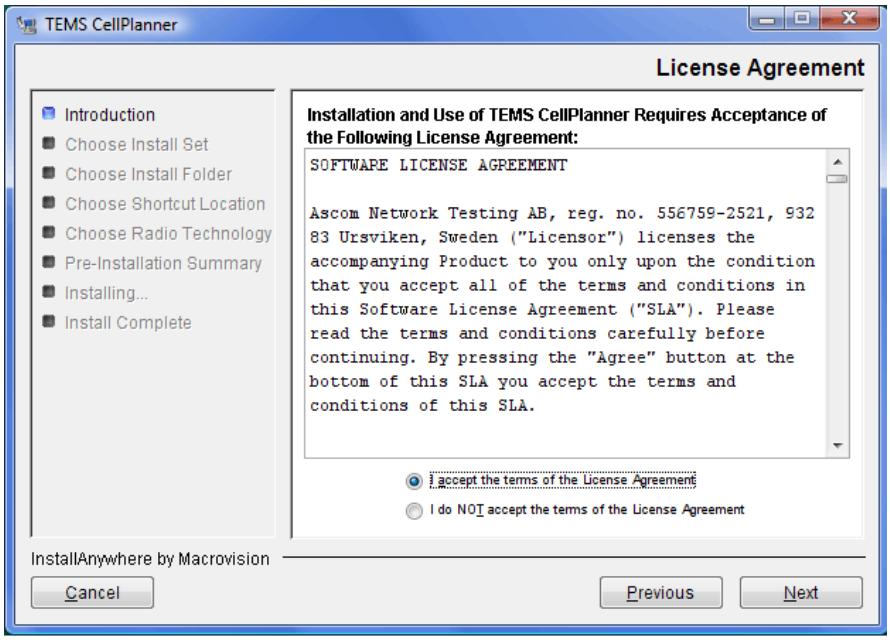
   Downloaded: Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example:
   `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`

   On DVD: Place the TEMS CellPlanner DVD in the DVD drive.
   If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example:
   `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:


TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

3. Click **Next**. The **License Agreement** window appears, as shown in the following example:

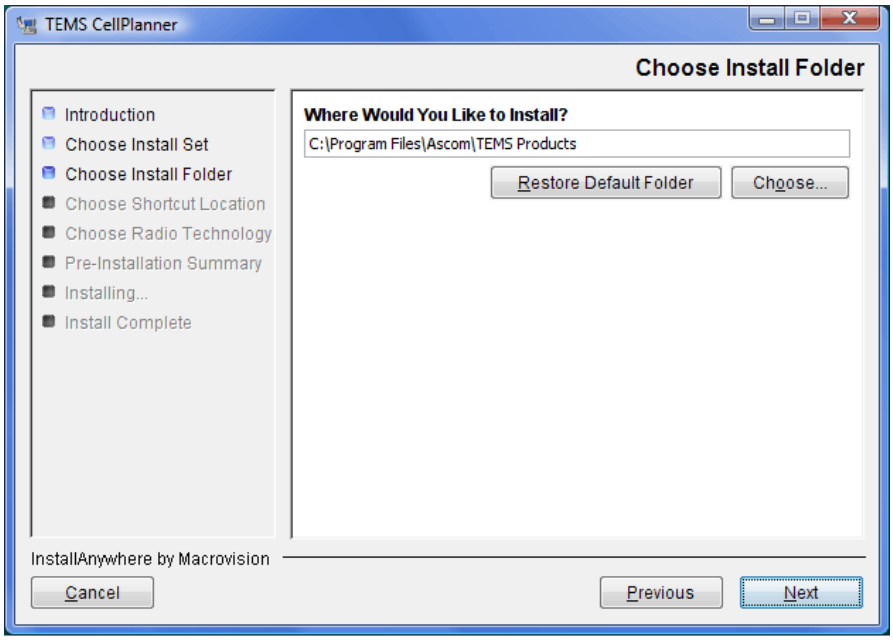

TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next** to continue. The **Choose Install Set** window appears.

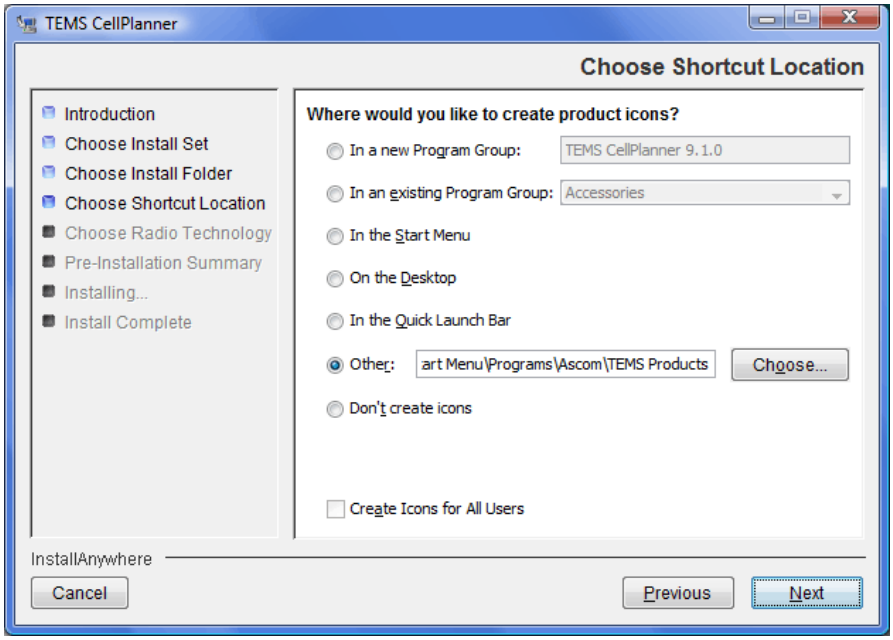
5. To install server software interfacing an Oracle server, select **Enterprise Server**.

TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

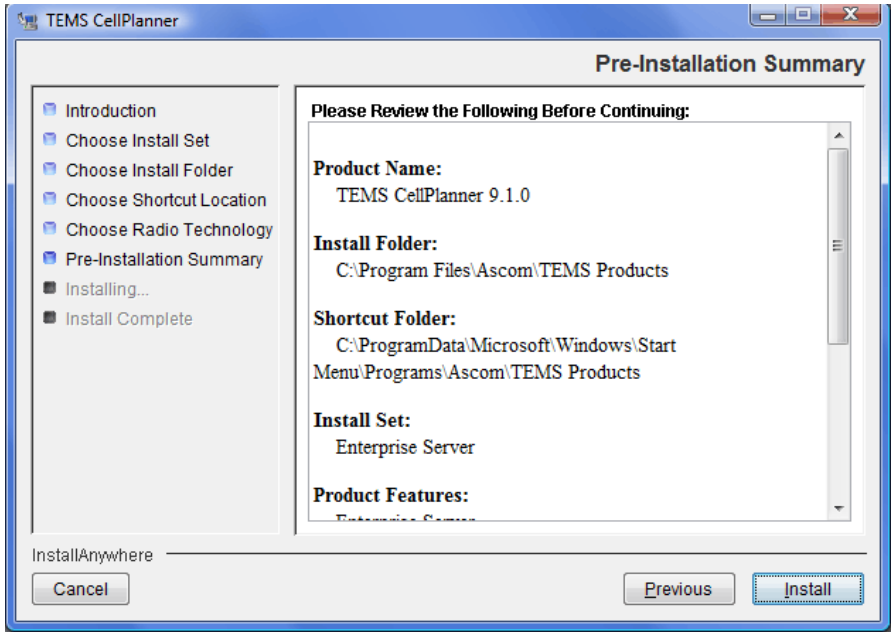
6. Click **Next** to continue. The **Choose Install Folder** window appears:



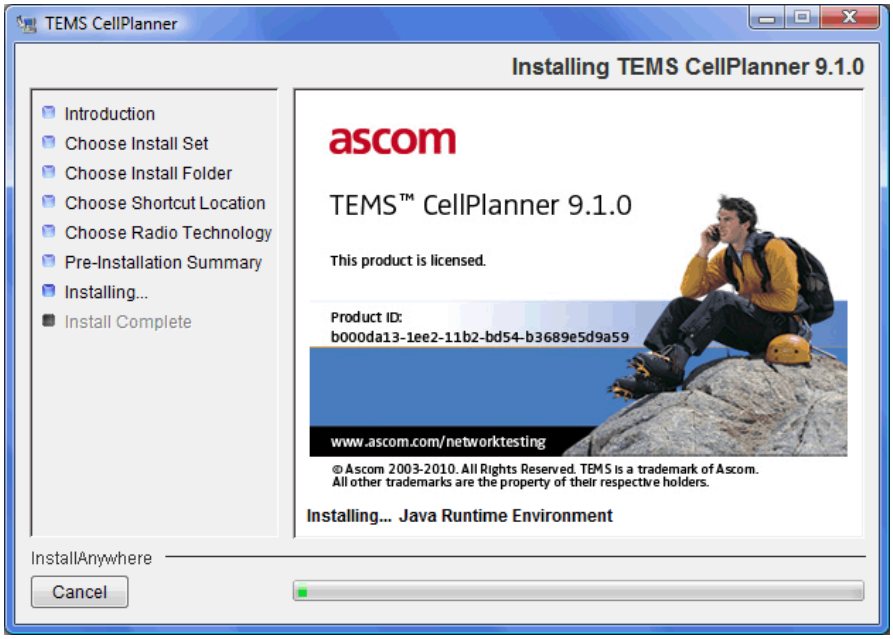
7. Click **Next** to continue. The **Choose Shortcut Location** window appears, as shown in the following example:



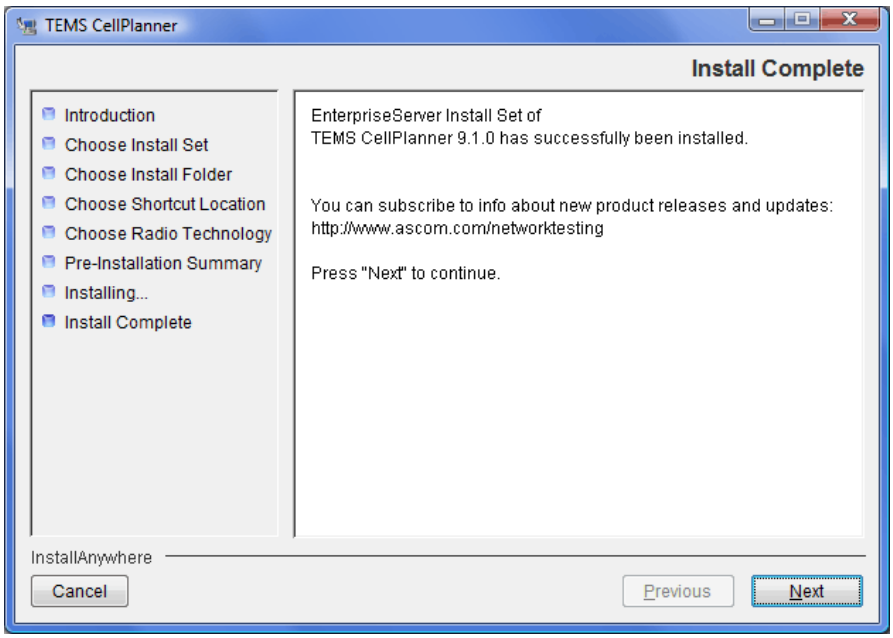
8. Click **Next** and the **Pre-Installation Summary** window appears as in the following example:



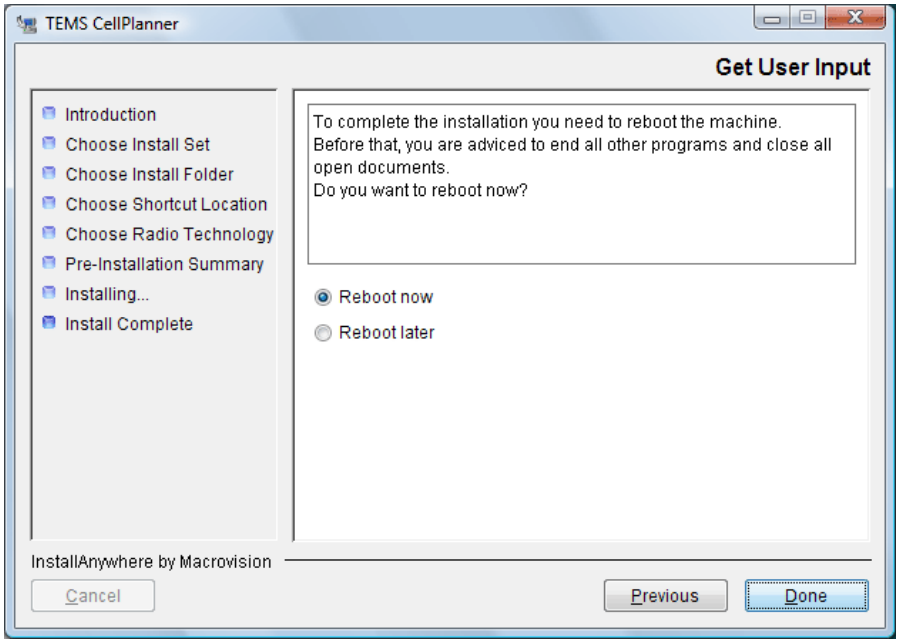
9. Select **Install** to complete the installation. The **Installing** TEMS CellPlanner window appears as shown in the following example:



10. When the installation completes, the **Install Complete** window appears, as in the following example:



11. Click **Done**. The Reboot window appears, asking you to reboot the computer:



12. Reboot is necessary only the first time you install a new version of the Enterprise Server as environment variables need to be initiated. Select the appropriate reboot option. If you select **Reboot now**, first close all other programs to not lose any data.
13. Click **Done**. If you selected to reboot now, the computer is restarted.

Proceed with Configure Oracle Connection Parameters.

11.9 Configure Oracle Connection Parameters

Before you Start Enterprise Server you must set the Oracle connection parameters.

Preparations

Be prepared to enter Oracle configuration data, see Oracle Database Data to Record on page 10-3.

Procedure

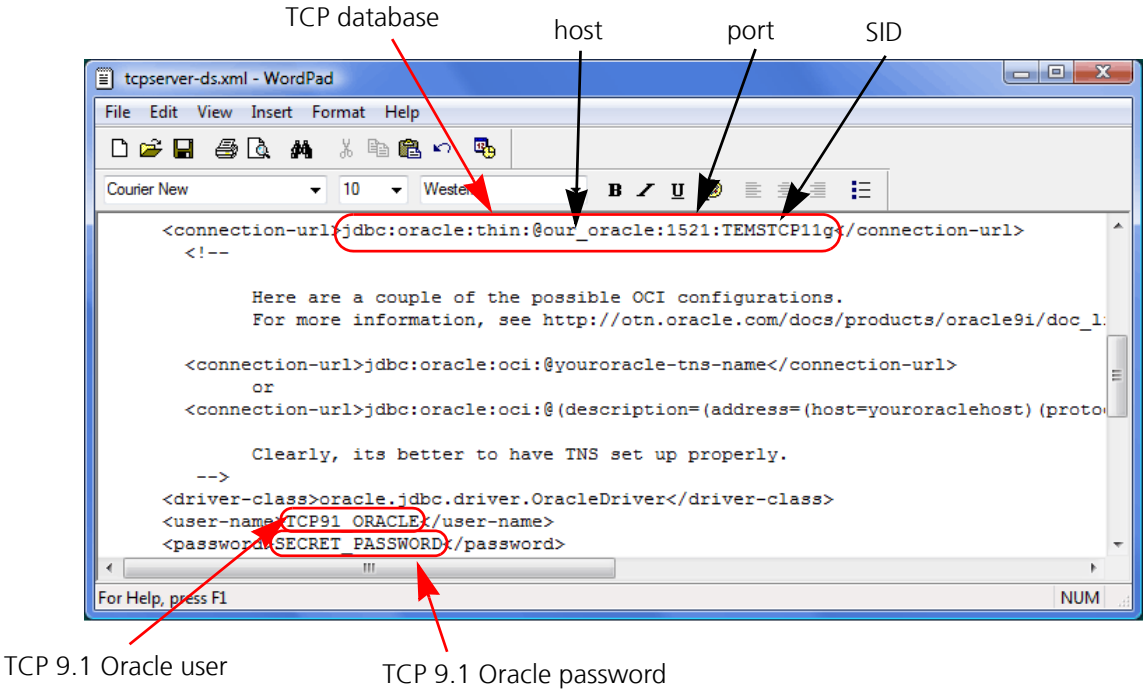
Do as follows to configure the Oracle connection parameters:

1. Open `C:\TCPJBoss\9.1.0\server\default\deploy\`**`tcpserver-ds.xml`** with Wordpad.
2. Enter proper values for parameters `connection-url`, `user-name` and `password`, see Parameters in tcpserver-ds.xml on page 11-14.
   The values to replace are marked as red bold italic in the list below:

   ```
   <connection-url><TCP database></connection-url>
   <user-name><TCP 9.1 Oracle user></user-name>
   <password><TCP 9.1 Oracle password></password>
   ```

3. Save the file.

Figure 11–1 Example of tcpserver-ds.xml



Tip: Save a copy of `tcpserver-ds.xml`. If you reinstall the TEMS CellPlanner Enterprise Server the current `tcpserver-ds.xml` file is replaced with a default file and you have to reenter the configuration data.

The settings will take effect at next start of the Enterprise Server. Before starting the Enterprise Server you must first Initiate Database Tables and Create ADMIN User.

Parameters in tcpserver-ds.xml

The parameters in tcpserver-ds.xml correspond to Oracle parameters, see Oracle Database Data to Record on page 10-3.

TCP database	Tagged as `<connection-url>`. Identifies the driver connecting to the Oracle engine, and the Oracle database area for TEMS CellPlanner. Replace the parameters within brackets <>. Syntax: `jdbc:oracle:thin:@<host>:<port>:<SID>` • `host` Host name or IP address for the Oracle database server. Oracle parameter: **Oracle database server name**. • `port` Entry for the TEMS CellPlanner part of the Oracle database, default **1521**. It is possible but not common to define multiple TEMS CellPlanner databases. In that case, use 1522 and so on as port numbers for additional databases. • `SID` Identifier of the Oracle database area reserved for TEMS CellPlanner. Oracle parameter: **SID**. Example: `jdbc:oracle:thin:@our_oracle_server:1521:TEMSTCP11G`
TCP 9.1 Oracle user	Tagged as `<user-name>`. Used by TEMS CellPlanner Enterprise Server 9.1 to login to Oracle and access the tablespace associated with the user. Oracle parameter: **User Name of the Oracle user**. Example: `TCP91_ORACLE`
TCP 9.1 Oracle password	Tagged as `<password>`. Password of **TCP 9.1 Oracle user**. Oracle parameter: **Password of Oracle user**. Example: `TCP91_ORACLE`

11.10 Initiate Database Tables and Create ADMIN User

After Configure Oracle Connection Parameters you shall initiate the *database tables* in the tablespace for TEMS CellPlanner 9.1. You later address this tablespace by entering the TCP 9.1 Oracle user name and password.

If you have followed preceding instructions properly, the Oracle user you entered is associated with a unique tablespace for this TEMS CellPlanner Enterprise Server version. *If the Oracle user is associated with a tablespace of an old* TEMS CellPlanner Enterprise Server *version, all information in that tablespace will be lost in this procedure*.

The database tables are TEMS CellPlanner version specific data structures in the Oracle tablespace and reflect the data structures in the TEMS CellPlanner applications. *The database tables must be initiated before projects can be stored in the tablespace*.

This procedure also creates an administrative user in the Enterprise Server, allowing you to login to the Enterprise Server to create users, user groups and setting permissions.

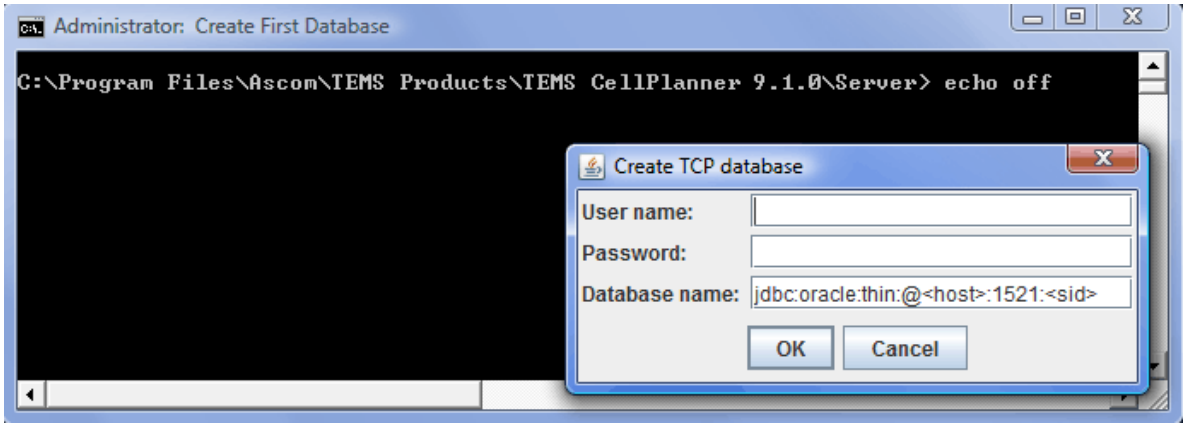
Preparations

Be prepared to enter values from Parameters in tcpserver-ds.xml.

Procedure

On the Enterprise Server computer, do as follows:

1. Select **Start↗Run** and open `C:\<Program Files>\Ascom\TEMS Products\TEMS CellPlanner 9.1.0\Server\CreateDB.bat`.
2. Click **OK** in the Run window. The **Create First Database** window appears and shortly after also the **Create TCP database** window. The first time you run this script the default values in the example below are displayed:

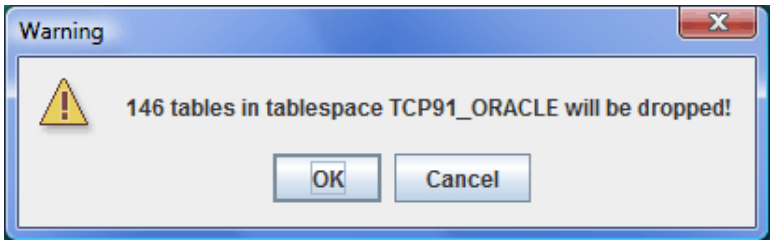


3. Enter the parameters needed to login to the Oracle database and access the tablespace of TEMS CellPlanner 9.1. The parameters correspond exactly to the Parameters in tcpserver-ds.xml .

Parameters in window **Create TCP database**	Corresponding parameters in file `tcpserver-ds.xml`
User name	TCP 9.1 Oracle user
Password	TCP 9.1 Oracle password
Database name	TCP database

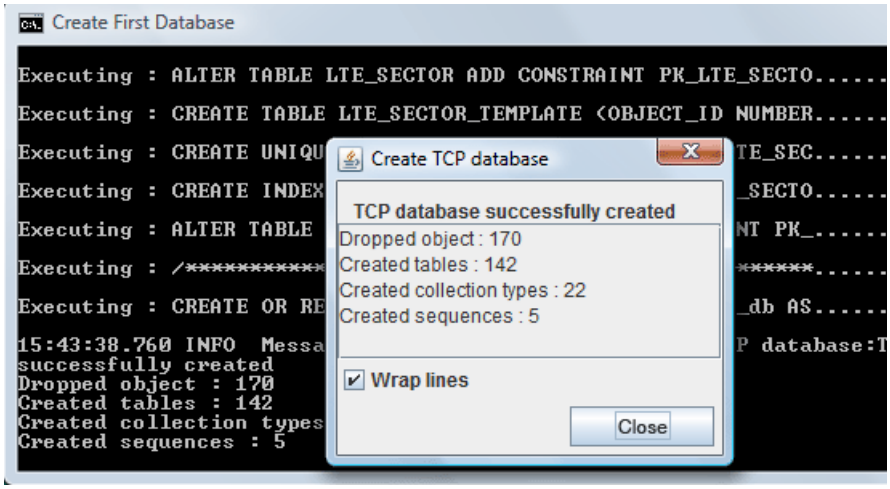
4. The result might look as in the following example:

5. Click **OK**. A warning about deletion of all data in the tablespace appears. The warning might look as in the following example:



6. If you want to proceed, click **OK**. The addressed tablespace is cleared in the Oracle database. New database tables reflecting the data structure in the current TEMS CellPlanner Enterprise Server version are built in the tablespace. The **Create First Database** window shows the progress.

7. When the database tables are initiated, the result is displayed as in the following example:



8. Click **Close**.

The database is now prepared to store TEMS CellPlanner 9.1 projects.

Proceed with Start Enterprise Server.

11.11 Start Enterprise Server

In previous section Initiate Database Tables and Create ADMIN User you made the Oracle database ready to store projects of this TEMS CellPlanner version.

You shall now start the TEMS CellPlanner Enterprise Server to make it possible for Clients to store and access projects in the database.

The Enterprise Server can be started either as a Windows service - the preferred choice - or as an ordinary process.

11.11.1 A: Start Enterprise Server as a Windows Service

From TEMS CellPlanner version 8.0 you can register and start the TEMS CellPlanner Enterprise Server (previously named TEMS CellPlanner Server) as a Windows service. It is recommended to use this method for an Enterprise Server installed on Windows 2003, and you can use the same method on any supported operating system.

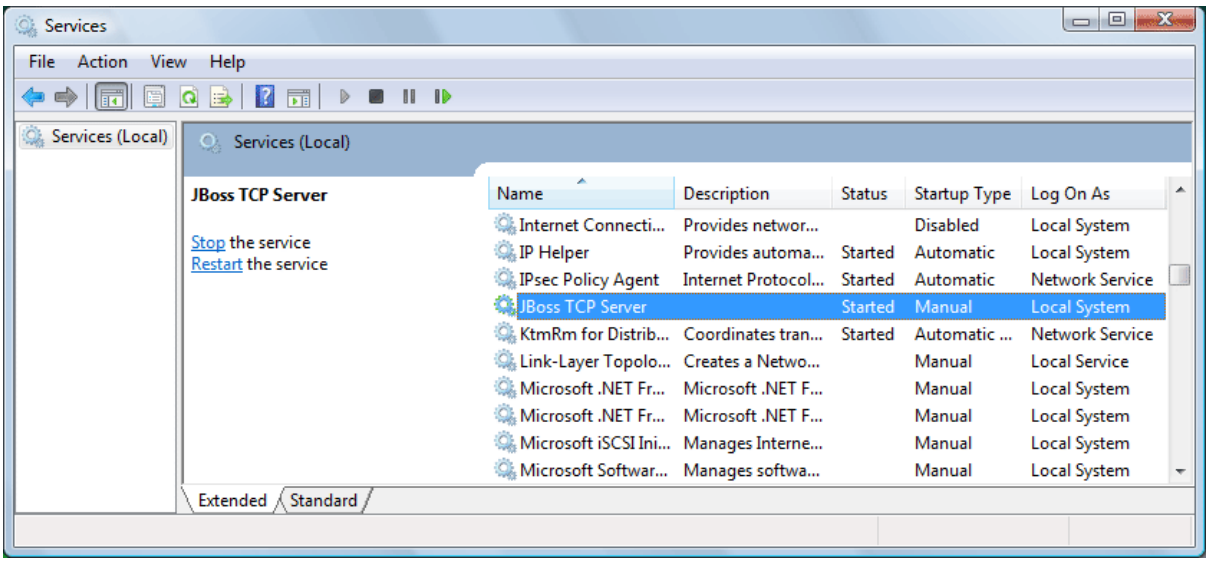
A Windows service is registered in the Windows Control Panel and can be configured to restart automatically at computer restart.

Do as follows to start the Enterprise Server as a Windows service:

1. Open the **Control Panel.**
2. Select **Administrative Tools.**
3. Select **Services**. The **Services** window is opened.
4. To install the Enterprise Server as a Windows service, do as follows:
   - From the Windows task bar, select **Run**, enter `C:\TCPJBoss\9.1.0\bin\installwrapper.bat` and click **OK**.
   - In the **Services** window, select **Action↗Refresh**. The **JBoss TCP Server** appears as a service.

   Note: *From TEMS CellPlanner 8.1 this service is a JBoss service. In TCP 8.0 the corresponding name of the service was TCPServer.*

5. To start the service, do as follows:
   - In the **Services** window, right-click on **JBoss TCP Server** and select **Properties**.
   - In the **JBoss TCP Server Properties** window, select startup type **Automatic.**
   - Click **Start** and **OK.** The status column shows that the service is started as in the following example (here in Manual mode, not Automatic):


Services
File Action View Help
Services (Local)
Services (Local)
JBoss TCP Server
Stop the service
Restart the service
Name Description Status Startup Type Log On As
Internet Connecti... Provides networ... Disabled Local System
IP Helper Provides automa... Started Automatic Local System
IPsec Policy Agent Internet Protocol... Started Automatic Network Service
JBoss TCP Server Started Manual Local System
KtmRm for Distrib... Coordinates tran... Started Automatic ... Network Service
Link-Layer Topolo... Creates a Netwo... Manual Local Service
Microsoft .NET Fr... Microsoft .NET F... Manual Local System
Microsoft .NET Fr... Microsoft .NET F... Manual Local System
Microsoft iSCSI Ini... Manages Interne... Manual Local System
Microsoft Softwar... Manages softwa... Manual Local System
Extended Standard

You can now proceed with View JBoss JMX Attributes (Optional).

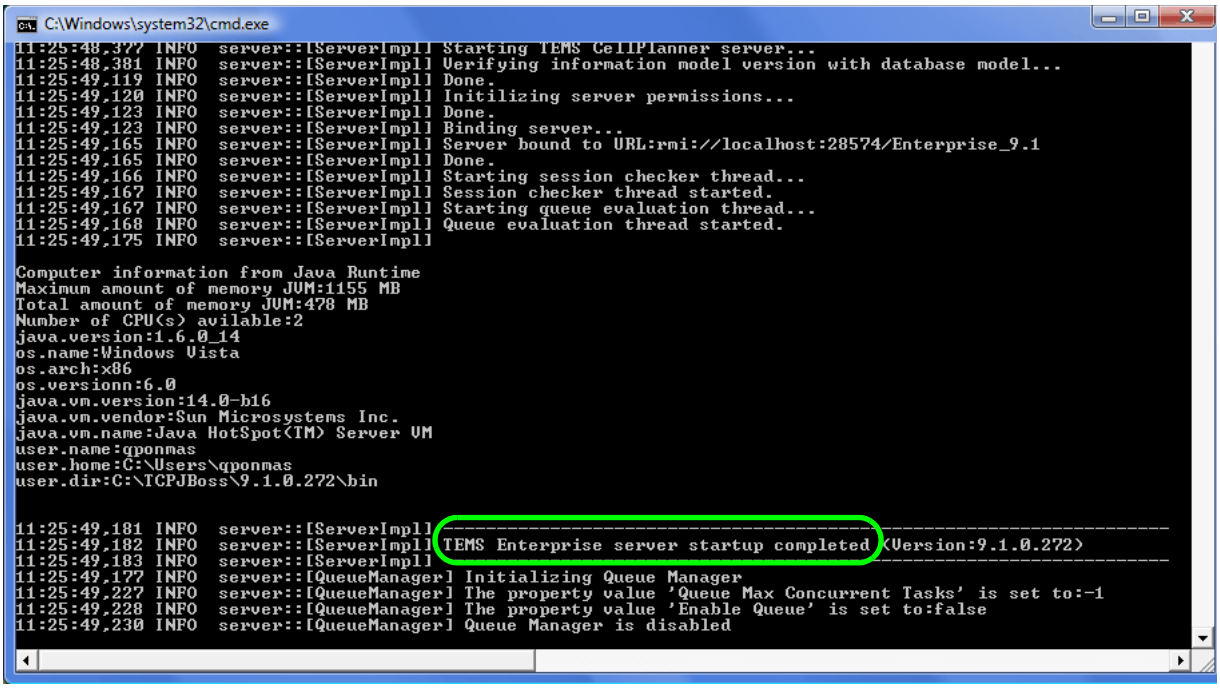
11.11.2 B: Start Enterprise Server as an Ordinary Process

As an alternative, you may start the TEMS CellPlanner Enterprise Server as an ordinary process. This process is stopped at logout, it is easily terminated by mistake, and if the computer restarts you must start the Enterprise Server again. This method is useful while testing the Enterprise Server, but when users start accessing the

Enterprise Server it is recommended to A: Start Enterprise Server as a Windows Service.

Do as follows to start the TEMS CellPlanner Enterprise Server as an ordinary process:

1. Select **Start↗Programs↗Ascom↗TEMS Products↗TEMS CellPlanner <version number>↗Server**, or
   start `C:\TCPJBoss\9.1.0\bin\run.bat` from the **Run** window.
2. The Enterprise Server starts and reads the configuration file `tcpserver-ds.xml`. The process `java.exe` appears in the Windows Task Manager window and a command window shows the startup progress as in the following example:


C:\Windows\system32\cmd.exe
11:25:48,377 INFO server::[ServerImpl] Starting TEMS CellPlanner server...
11:25:48,381 INFO server::[ServerImpl] Verifying information model version with database model...
11:25:49,119 INFO server::[ServerImpl] Done.
11:25:49,120 INFO server::[ServerImpl] Initilizing server permissions...
11:25:49,123 INFO server::[ServerImpl] Done.
11:25:49,123 INFO server::[ServerImpl] Binding server...
11:25:49,165 INFO server::[ServerImpl] Server bound to URL:rmi://localhost:28574/Enterprise_9.1
11:25:49,165 INFO server::[ServerImpl] Done.
11:25:49,166 INFO server::[ServerImpl] Starting session checker thread...
11:25:49,167 INFO server::[ServerImpl] Session checker thread started.
11:25:49,167 INFO server::[ServerImpl] Starting queue evaluation thread...
11:25:49,168 INFO server::[ServerImpl] Queue evaluation thread started.
11:25:49,175 INFO server::[ServerImpl]
Computer information from Java Runtime
Maximum amount of memory JVM:1155 MB
Total amount of memory JVM:478 MB
Number of CPU(s) avilable:2
java.version:1.6.0_14
os.name:Windows Vista
os.arch:x86
os.versionn:6.0
java.vm.version:14.0-b16
java.vm.vendor:Sun Microsystems Inc.
java.vm.name:Java HotSpot(TM) Server VM
user.name:qponmas
user.home:C:\Users\qponmas
user.dir:C:\TCPJBoss\9.1.0.272\bin
11:25:49,181 INFO server::[ServerImpl]
11:25:49,182 INFO server::[ServerImpl] TEMS Enterprise server startup completed (Version:9.1.0.272)
11:25:49,183 INFO server::[ServerImpl]
11:25:49,177 INFO server::[QueueManager] Initializing Queue Manager
11:25:49,227 INFO server::[QueueManager] The property value 'Queue Max Concurrent Tasks' is set to:-1
11:25:49,228 INFO server::[QueueManager] The property value 'Enable Queue' is set to:false
11:25:49,230 INFO server::[QueueManager] Queue Manager is disabled

> ***Note:*** *The command window opens only if the Enterprise Server is started. The Enterprise Server does not start if any preceding procedure fails, for example if the database tables in Oracle have been initiated from an Enterprise Server of another version than the currently installed.*

3. Ensure that "`Server startup completed`" is displayed in the command window. The Enterprise Server is now ready to accept login from TEMS CellPlanner Clients and TEMS CellPlanner User Administration.
4. This command window must remain open as long as TEMS CellPlanner Clients need access to the Oracle database, or the User Administration tool needs access to Enterprise Server.

You can now proceed with View JBoss JMX Attributes (Optional) on page 11-20.

11.12 View JBoss JMX Attributes (Optional)

You can manage and monitor the Enterprise Server remotely using the JMX (Java Management eXtensions) console addressing port 8080. This remote management is provided by the JBoss environment introduced in TEMS CellPlanner 8.1.

For more information on the JBoss application server, see http://www.jboss.org.

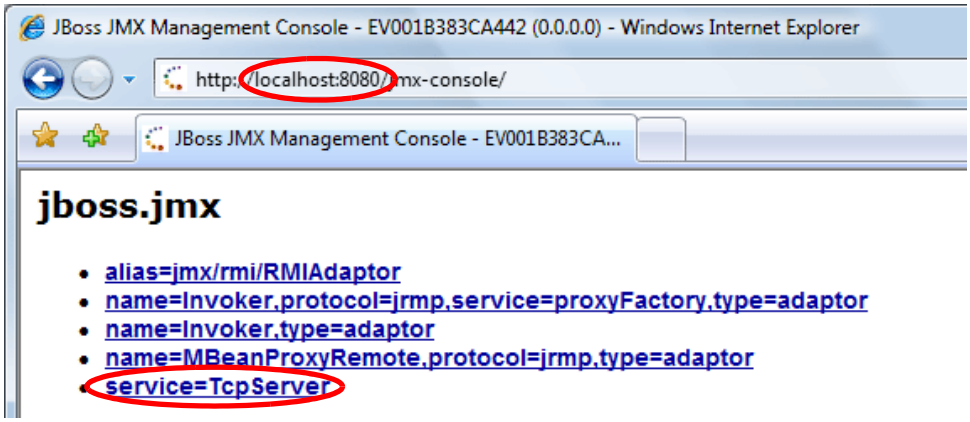
Prerequisites

The TEMS CellPlanner Enterprise Server is started, see Start Enterprise Server on page 11-17.

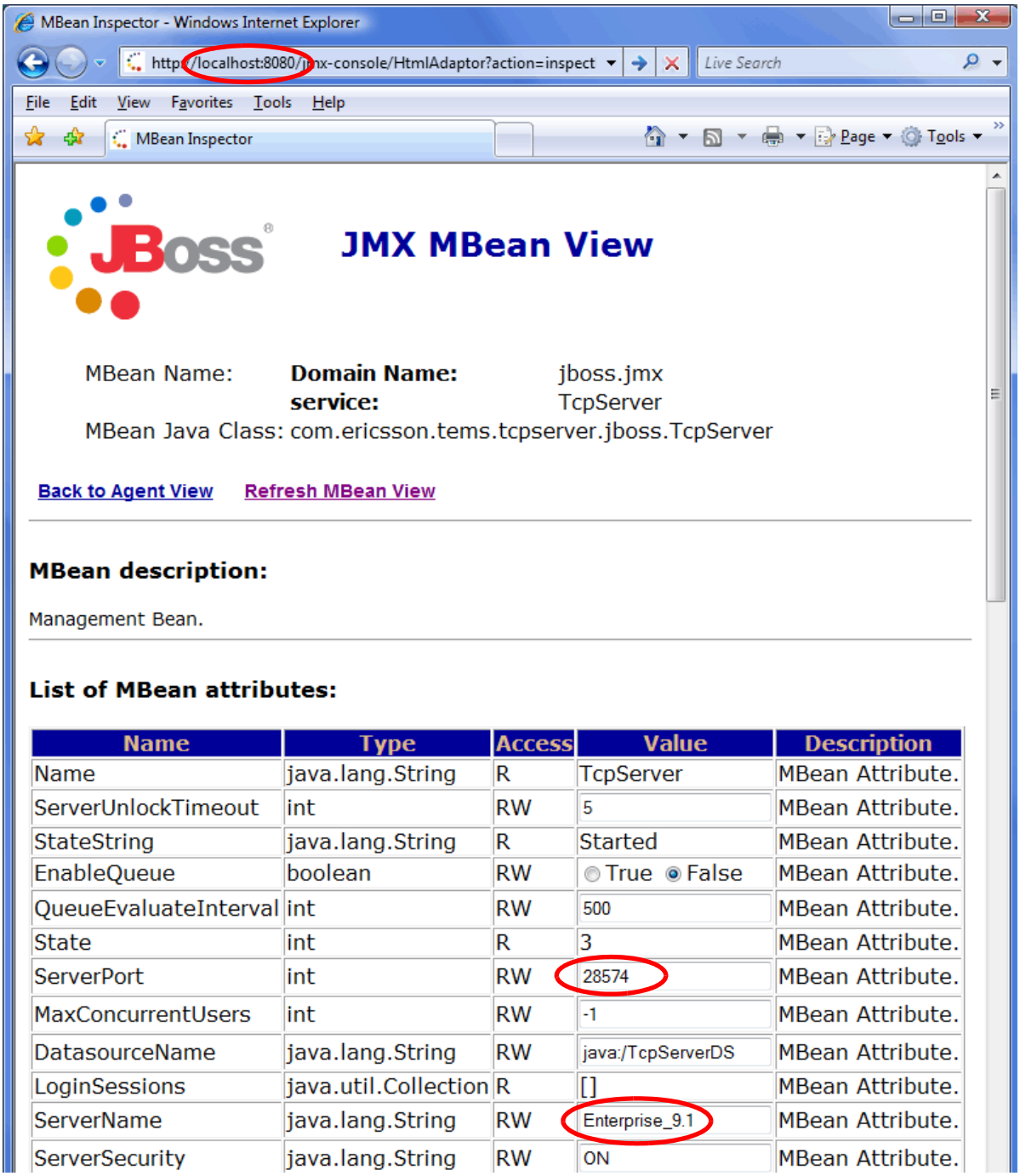
Procedure

1. Open Internet Explorer or a similar application.
2. Go to URL `http://<Enterprise Server host>:8080`. The JBoss portal window of the addressed host is displayed as in the following example where the host name is "localhost" as the web explorer is opened on the computer where the TEMS CellPlanner Enterprise Server is installed:

3. Click on **JMX Console**. The JBoss JMX Management Console window is displayed as in the following example:



4. Click on the service=TcpServer link. The JMX MBean window appears as in the following example showing the TEMS CellPlanner Enterprise Server attributes:


MBean Inspector - Windows Internet Explorer
http://localhost:8080/jmx-console/HtmlAdaptor?action=inspect
Live Search
File Edit View Favorites Tools Help
MBean Inspector
Page Tools
JMX MBean View
MBean Name: Domain Name: jboss.jmx
service: TcpServer
MBean Java Class: com.ericsson.tems.tcpserver.jboss.TcpServer
Back to Agent View
Refresh MBean View
MBean description:
Management Bean.
List of MBean attributes:
Name | Type | Access | Value | Description
Name | java.lang.String | R | TcpServer | MBean Attribute.
ServerUnlockTimeout | int | RW | 5 | MBean Attribute.
StateString | java.lang.String | R | Started | MBean Attribute.
EnableQueue | boolean | RW | True False | MBean Attribute.
QueueEvaluateInterval | int | RW | 500 | MBean Attribute.
State | int | R | 3 | MBean Attribute.
ServerPort | int | RW | 28574 | MBean Attribute.
MaxConcurrentUsers | int | RW | -1 | MBean Attribute.
DatasourceName | java.lang.String | RW | java:/TcpServerDS | MBean Attribute.
LoginSessions | java.util.Collection | R | [] | MBean Attribute.
ServerName | java.lang.String | RW | Enterprise_9.1 | MBean Attribute.
ServerSecurity | java.lang.String | RW | ON | MBean Attribute.

The "RW" attributes can be modified, "R" attributes are read-only.

You later associate the **host** name (or IP address) in the URL field, and the MBean attributes **ServerName** and **ServerPort** values with a server nickname, see Configure Connection Data and Change Password on page 11-23.

If you modify any attribute you must restart the Enterprise Server before the new value is taken into account, see Start Enterprise Server on page 11-17. You must also ensure that the local connection data match the MBean attributes, see Configure Connection Data and Change Password on page 11-23.

11.13 Configure Connection Data and Change Password

After having started TEMS CellPlanner Enterprise Server 9.1, you can login to the Enterprise Server as an administrative user to configure local connection data on this computer and optionally change the ADMIN password in the Enterprise Server.

The local connection data will be used as a lookup table when connecting to a certain Enterprise Server in the network.

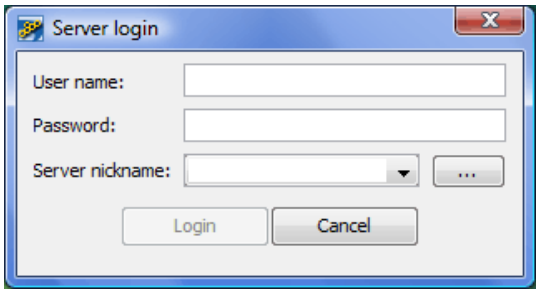
Prerequisites

- The server is up and running, see Start Enterprise Server on page 11-17.
- The TEMS CellPlanner User Administration tool is installed. It is installed together with the Enterprise Server but can be explicitly installed on any computer, see Installing the User Administration Tool on page 13-1.
- You are authorized to login as administrator on the Enterprise Server.

Procedure

Follow these steps to initiate the TEMS CellPlanner Enterprise Server:

1. Login to the computer from where you will administer the Enterprise Server. It might be the same computer as the one where Enterprise Server is installed, or any other computer in the network.
2. Login to the TEMS CellPlanner User Administration tool by selecting **Programs↗Ascom↗TEMS Products↗TEMS CellPlanner 9.1.0↗User Administration** from the start menu. An empty dialog is displayed the first time you open this window.



3. Configure Local Connection Data
4. Recommended: Login to the Enterprise Server and Change Password

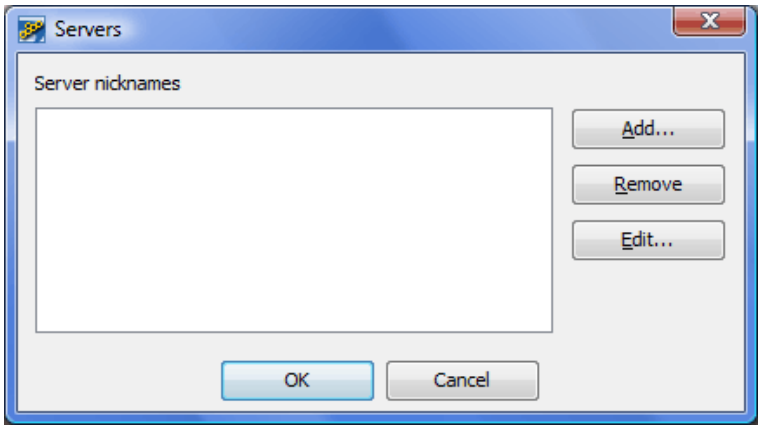
If you are upgrading, proceed with Import Projects and Account Information on page 11-28.

11.13.1 Configure Local Connection Data

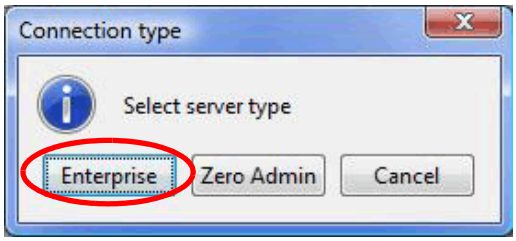
The local connection data is a locally stored record associating a nickname with the real location of a TEMS CellPlanner Enterprise Server. You need one connection data record per Enterprise Server that will be accessed from this computer.

When you have opened the TEMS CellPlanner User Administration tool, do as follows:

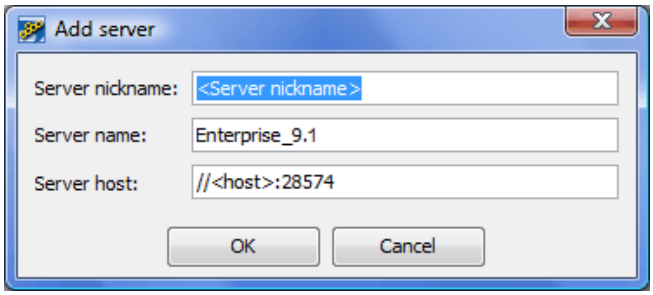
1. Click ... at the **Server nickname**. The **Servers** window lists all configured connections towards Enterprise Servers on any host. The example below shows the initial case with no servers displayed:



2. Click **Add** and select **Enterprise** as this is the server type you want to connect to:



3. The **Add server** window appears with initial values.



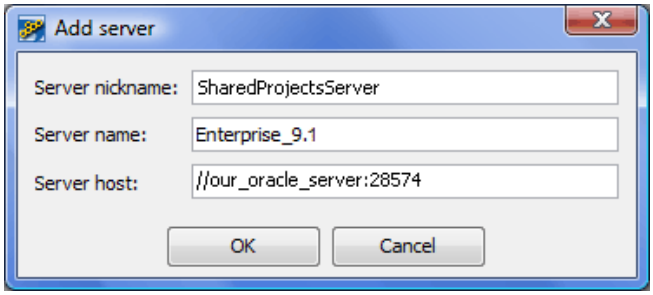
4. Here you associate a nickname with an Enterprise Server installed somewhere in the network. When a client logs into a server named <**Server nickname**>, it will be connected to the <**Server name**> service on the <**Server host**>.

   The initial settings of the parameters in the **Add server** window are taken from the JMX attributes on the local computer, see View JBoss JMX Attributes (Optional) on page 11-20.:

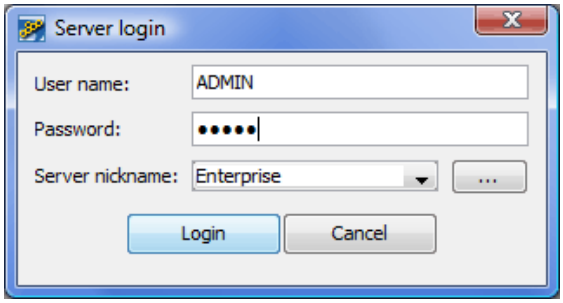
Server nickname	Your easy-to-remember and unique name of the Enterprise Server. Modify as you like.
Server name	Logical name of the JBoss Server instance. Must match the JMX MBean attribute **ServerName** on the addressed **Server host**.
Server host	URL to addressed TEMS CellPlanner Enterprise Server. Syntax: `//<host>:<port>` `<host>` = Host part of the URL in the JMX Console address field. Enter `localhost` if the Enterprise Server is installed on the same computer as the User Administration tool you are currently running. `<port>` = Port of the TEMS CellPlanner Enterprise Server. Must match the host's JMX Mbean attribute **ServerPort** of the service (**Server name**).

   Enter a **Server nickname** and enter the IP address or name of the **Server host** where the Enterprise Server is installed. *Advanced: If you have modified the port number in the JMX attributes, you must also modify the port in the **Server host** parameter accordingly.*

The figure below shows an example of an updated connection configuration:



5. Click **OK** twice to get back to the **Server login** window.

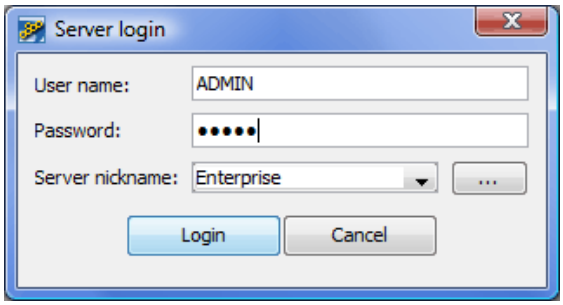


After this it is recommended to Login to the Enterprise Server and Change Password to test your connection data, and to choose a safer password.

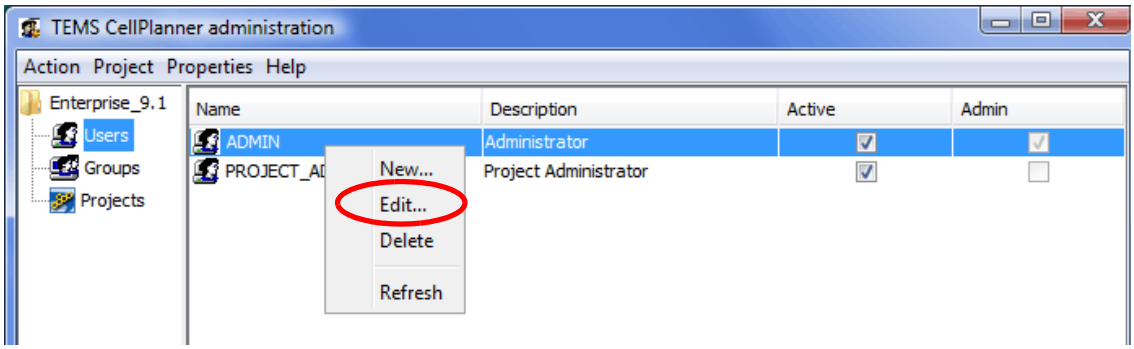
11.13.2 Login to the Enterprise Server and Change Password

After Configure Local Connection Data, do as follows:

1. Enter the initial administrator user name ADMIN and initial password ADMIN. The input fields are case sensitive.



2. Click **Login.** The TEMS CellPlanner administration window opens.
3. Right-click on ADMIN, select **Edit** and change ADMIN's password:



4. From this window you can also add users and user groups, set permissions, and assign administrative rights to other users than ADMIN. For complete information on how to administer users and projects, see the *TEMS CellPlanner Common Features User's Guide*, chapter *Administration of* TEMS CellPlanner.

Important: Do not forget to record the new password of ADMIN and possible new administrative accounts! If no one can login as administrator, contact TEMS Support for advise. In worst case you have to reinstall the Enterprise Server and reenter users and projects from scratch.

11.14 Import Projects and Account Information

After Start Enterprise Server it is time to complete an initiated migration. If you have exported projects to read back into the database, optionally together with account information for the Enterprise Server, follow the instructions from Migrate DB, Part IV: Import Projects (and Accounts) in Migrate Database (DB) to TEMS CellPlanner 9.1.

11.15 Cancel Installation

You can cancel the installation at any time:

1. Click **Cancel** and the Cancel Installation window appears as shown in the following example:

Cancel Installation
Installation Not Complete
If you cancel the installation now, TEMS CellPlanner 9.1.0 will not be installed. To continue with the installation, click 'Resume'. To cancel the installation, click 'Quit'.
Quit
Resume

2. Select **Resume** to proceed with the installation.
3. Select **Quit** to stop the installation.

12
Installing Zero Admin Server

This chapter describes how to install the TEMS CellPlanner Zero Admin Server software.

Topics **Page**

About the Zero Admin Server 12-2
Database in Zero Admin Server 12-2
Backups in Zero Admin Server 12-2
How to Install Zero Admin Server 12-3
Prepare Installation of Zero Admin Server 12-3
Export Projects and Account Information 12-3
Stop Zero Admin Server 12-4
A: Stop Zero Admin Server as a Windows Service 12-4
B: Stop Zero Admin Server as an Ordinary Process 12-5
Install Zero Admin Server 12-6
Start Zero Admin Server 12-12
A: Start Zero Admin Server as a Windows Service 12-12
B: Start Zero Admin Server as an Ordinary Process 12-13
View JBoss JMX Attributes (Optional) 12-15
Configure Backup Location for Zero Admin Server 12-18
Configure Connection Data and Change Password 12-18
Import Projects and Account Information 12-22
Cancel Installation 12-22

12.1 About the Zero Admin Server

The TEMS CellPlanner Zero Admin Server is a software managing the connections, data transfer and conflict resolution between TEMS CellPlanner Clients and an embedded database with shared TEMS CellPlanner projects.

The Zero Admin Server must be of the same version as the TEMS CellPlanner clients in the network.

For more information on the TEMS CellPlanner Zero Admin Server, see TEMS CellPlanner Servers for Shared Projects on page 9-3.

12.1.1 Database in Zero Admin Server

The Zero Admin Server uses an embedded database server to store and manage TEMS CellPlanner projects. The database is stored in the home directory ($USERPROFILE) of the user starting the Zero Admin Server service.

12.1.2 Backups in Zero Admin Server

The Zero Admin Server performs backup once a day if the server is up and running. The backup function is always on. Backup files are kept for the last 7 days. When a backup is older than 7 days it is replaced by a new backup file in a round-robin manner. In addition to these daily backups, one backup per week and one backup per month is preserved.

This means that for the past week one backup per day can be recovered, for the past month one backup per week can be restored, and for the last month one backup can be restored.

Example: The maximum number of backups are taken during 2 months of running Zero Admin Server without interruption. If the current date is 2009-08-28 and all backups were successfully completed, the following backups are stored on disk:

Daily backups:	09-08-27, 09-08-26, 09-08-25, 09-08-24, 09-08-23, 09-08-22, 09-08-21
Weekly backups:	09-08-21, 09-08-14, 09-08-7, 09-08-31
Previous month:	09-07-31

Backups are by default stored in the same folder as the Database in Zero Admin Server. You should select another storage for your backups, see Configure Backup Location for Zero Admin Server on page 12-18.

It is also advised to regularly make archive copies and store those in a safe location.

12.2 How to Install Zero Admin Server

Follow this process to install and setup TEMS CellPlanner Zero Admin Server 9.1:

1. Prepare Installation of Zero Admin Server
2. At upgrade: Export Projects and Account Information
3. At upgrade: Stop Zero Admin Server
4. Install Zero Admin Server
5. Start Zero Admin Server
6. View JBoss JMX Attributes (Optional)
7. Configure Backup Location for Zero Admin Server
8. Configure Connection Data and Change Password
9. At upgrade: Import Projects and Account Information

12.3 Prepare Installation of Zero Admin Server

Ensure that the Zero Admin Server to install is of the same software version as the TEMS CellPlanner Clients that will access shared projects via the Zero Admin Server.

The Zero Admin Server and TEMS CellPlanner Clients can only exchange project data if they are compatible. To prevent incompatibility, only TEMS CellPlanner Clients of the same version as the Zero Admin Server are allowed to login to the Zero Admin Server and access projects in the database.

12.4 Export Projects and Account Information

If you want to reuse projects and accounts in database, you have to migrate the projects and accounts before upgrading to a new Zero Admin Server version.

You may also migrate projects and accounts from an Enterprise Server to move them to a Zero Admin Server.

A complete migration includes export of projects to XML files and import of the XML files and re-creation of projects. At this stage you export the projects to XML files. You may also export the account information of the exported projects. You will later import the XML files after installation of the new version of Zero Admin Server.

To export projects from the database, possibly together with the account information in the Zero Admin Server, follow the instructions up to and including Export Projects from... in Migrate Database (DB) to TEMS CellPlanner 9.1.

Proceed with Stop Zero Admin Server.

12.5 Stop Zero Admin Server

Before Install Zero Admin Server or Uninstalling TEMS CellPlanner Components, any running Zero Admin Server must be stopped to prevent project updates during upgrade.

Use one of the below procedures at upgrade from an existing version of Zero Admin Server, or to temporarily stop access to the Zero Admin Server for any other reason. Which procedure to choose depends on how the Zero Admin Server was started.

Caution: Use this procedure with caution as any interaction with TEMS CellPlanner Clients and the User Administration tool will stop immediately and project data might be lost.

12.5.1 A: Stop Zero Admin Server as a Windows Service

If you have started the Zero Admin Server as a Windows service, see A: Start Zero Admin Server as a Windows Service on page 12-12, do as follows to stop the service:

1. Open the **Control Panel.**
2. Select **Administrative Tools.**
3. Select the **Services** tab. The **Services** window is opened.
4. In the **Services** window, the name of the service **JBoss TCP Server** appears on a separate row.
5. Stop the service as follows:
   a. Select **JBoss TCP Server** and click the **Stop** button or choice, depending on the operating system.
   b. Right-click on **JBoss TCP Server** and select **Stop**.

   The status column indicates that the service is stopped.

To remove the current Zero Admin Server as a Windows service - mandatory at upgrade - do as follows:

1. Open the **Control Panel.**
2. Select **Administrative Tools.**
3. Select the **Services** tab. The **Services** window is opened.
4. In the **Services** window, the name of the service JBoss **TCP Server** appears on a separate row.
5. Select **Start↗Run**.

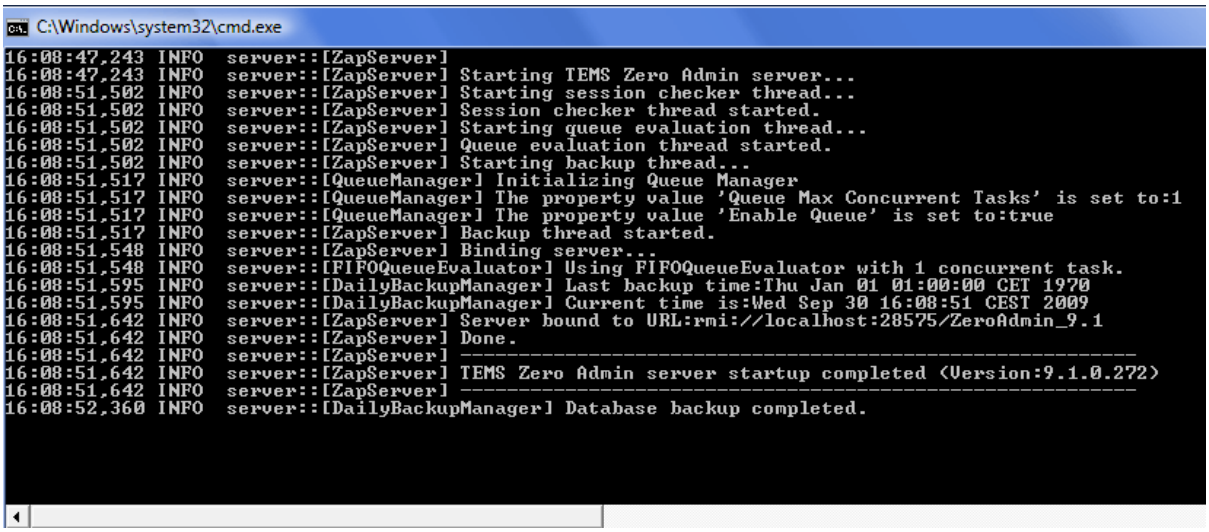
6. To uninstall the service select `C:\TCPJBoss\9.1.0\bin\uninstallwrapper.bat` and click **OK**.
7. Select **Action↗Refresh** in the **Services** window to verify that the **TCPServer** (or **JBoss TCP Server**) has disappeared as a service.

If you are upgrading, proceed with Install Zero Admin Server.

12.5.2 B: Stop Zero Admin Server as an Ordinary Process

If you have started the TEMS CellPlanner Zero Admin Server as an ordinary process, do as follows to stop the process:

1. Ensure that no TEMS CellPlanner Client nor User Administration tool is working towards the Zero Admin Server.
2. Close the window previously opened from B: Start Zero Admin Server as an Ordinary Process. The window looks as in the example below:


C:\Windows\system32\cmd.exe
16:08:47,243 INFO server::[ZapServer]
16:08:47,243 INFO server::[ZapServer] Starting TEMS Zero Admin server...
16:08:51,502 INFO server::[ZapServer] Starting session checker thread...
16:08:51,502 INFO server::[ZapServer] Session checker thread started.
16:08:51,502 INFO server::[ZapServer] Starting queue evaluation thread...
16:08:51,502 INFO server::[ZapServer] Queue evaluation thread started.
16:08:51,502 INFO server::[ZapServer] Starting backup thread...
16:08:51,517 INFO server::[QueueManager] Initializing Queue Manager
16:08:51,517 INFO server::[QueueManager] The property value 'Queue Max Concurrent Tasks' is set to:1
16:08:51,517 INFO server::[QueueManager] The property value 'Enable Queue' is set to:true
16:08:51,517 INFO server::[ZapServer] Backup thread started.
16:08:51,548 INFO server::[ZapServer] Binding server...
16:08:51,548 INFO server::[FIFOQueueEvaluator] Using FIFOQueueEvaluator with 1 concurrent task.
16:08:51,595 INFO server::[DailyBackupManager] Last backup time:Thu Jan 01 01:00:00 CET 1970
16:08:51,595 INFO server::[DailyBackupManager] Current time is:Wed Sep 30 16:08:51 CEST 2009
16:08:51,642 INFO server::[ZapServer] Server bound to URL:rmi://localhost:28575/ZeroAdmin_9.1
16:08:51,642 INFO server::[ZapServer] Done.
16:08:51,642 INFO server::[ZapServer] ----------
16:08:51,642 INFO server::[ZapServer] TEMS Zero Admin server startup completed (Version:9.1.0.272)
16:08:51,642 INFO server::[ZapServer] ----------
16:08:52,360 INFO server::[DailyBackupManager] Database backup completed.

3. The Zero Admin Server is stopped, the window disappears and the java.exe process disappears from **Windows Task Manager**.

If you are upgrading, proceed with Install Zero Admin Server.

12.6 Install Zero Admin Server

Use this procedure to install a new version of TEMS CellPlanner Zero Admin Server for the first time, or to upgrade from an older version.

Note: *A JBoss application server is installed together with the Zero Admin Server. No other program using the JBoss application server may be running when using the Zero Admin Server.*

The installation script installs one Zero Admin Server 9.1 per host. If you need more Zero Admin Servers on the same host, contact TEMS Support.

Prerequisites

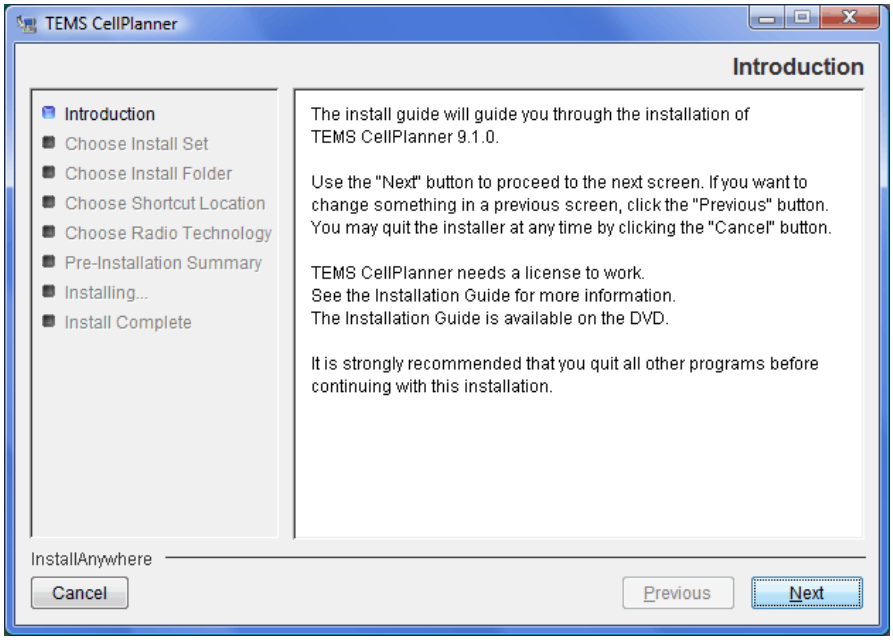
- Read Prepare Installation of Zero Admin Server.
- You must have administrator privileges on the computer.
- ***You must have exported old projects before upgrading the*** Zero Admin Server***, you will otherwise lose data.*** See Export Projects and Account Information on page 12-3.
- No Zero Admin Server is running, see Stop Zero Admin Server on page 12-4.
- No application using the JBoss application server is running. If you have such applications on your computer, contact TEMS Support for advise.

Procedure

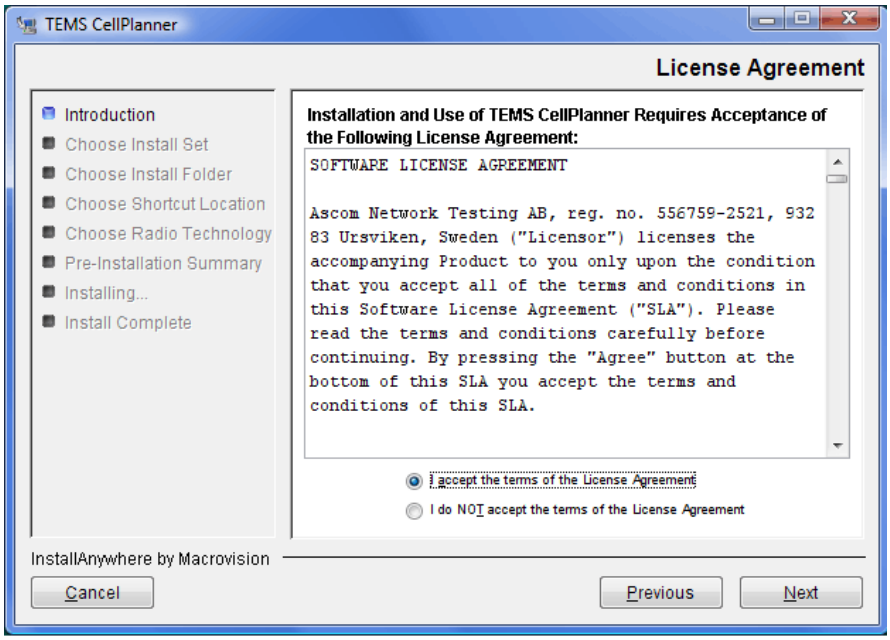
1. Start the installation according to how the software is packaged.

Downloaded:	Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`
On DVD:	Place the TEMS CellPlanner DVD in the DVD drive. If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:

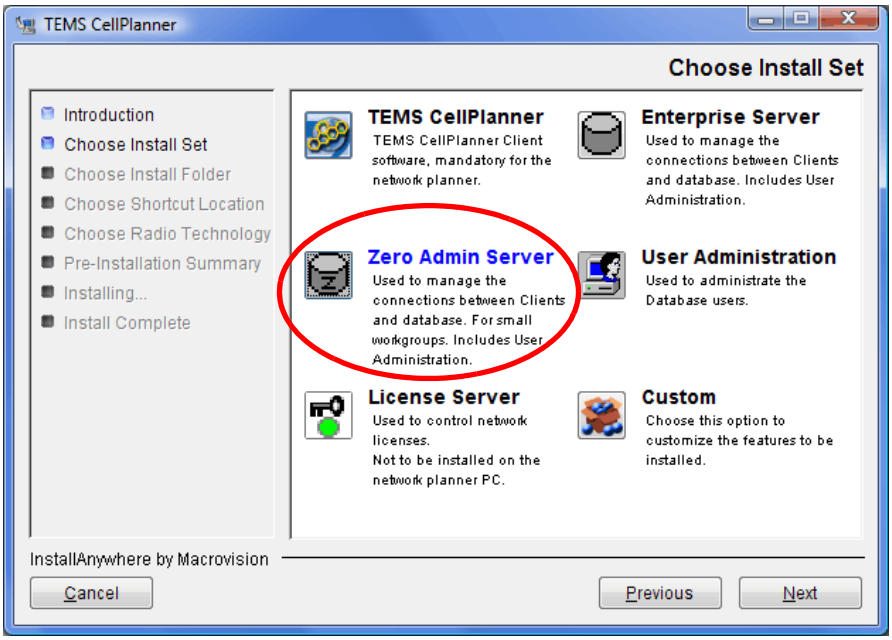

TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

3. Click **Next**. The **License Agreement** window appears, as shown in the following example:

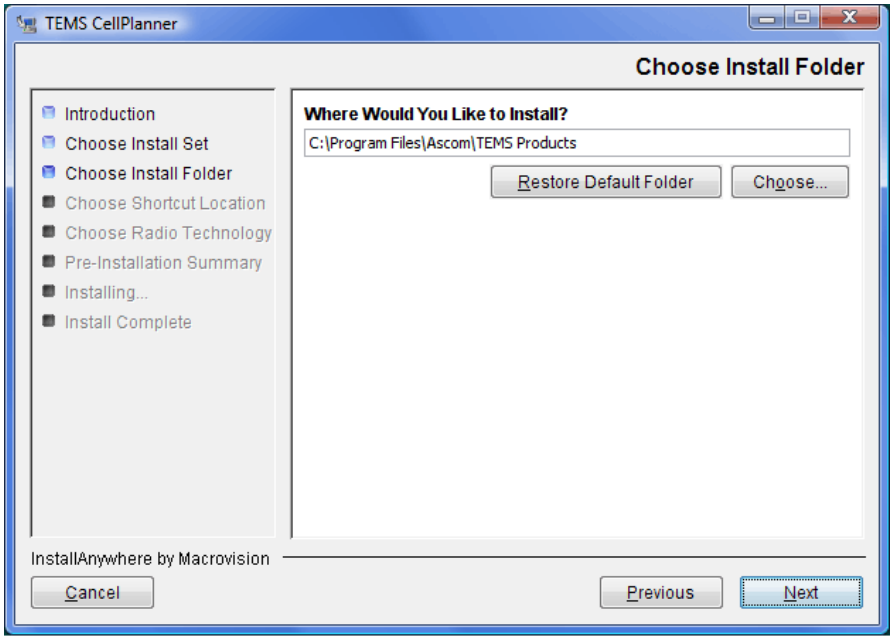

TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next** to continue. The **Choose Install Set** window appears.

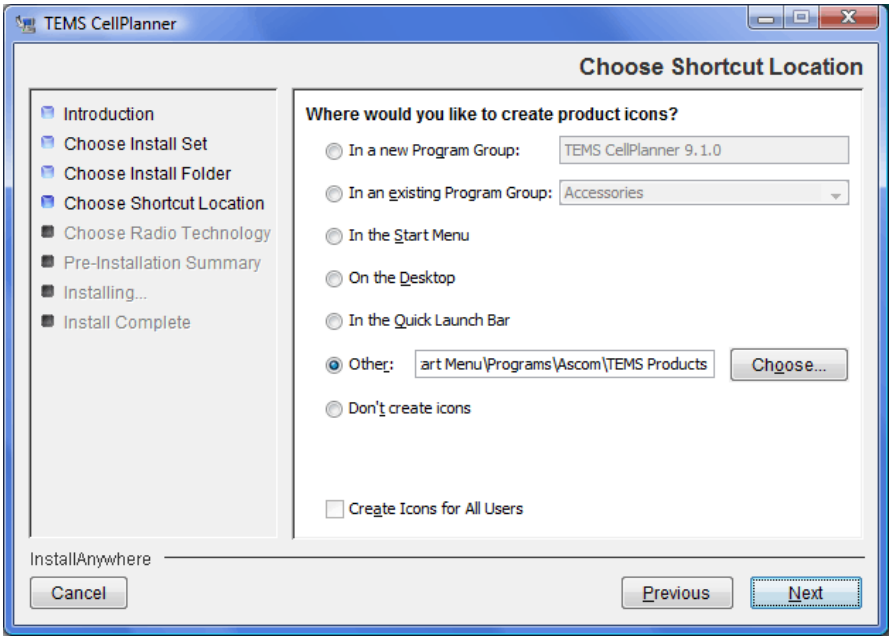
5. To install server software interfacing a database in your computer, select **Zero Admin Server**.


TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

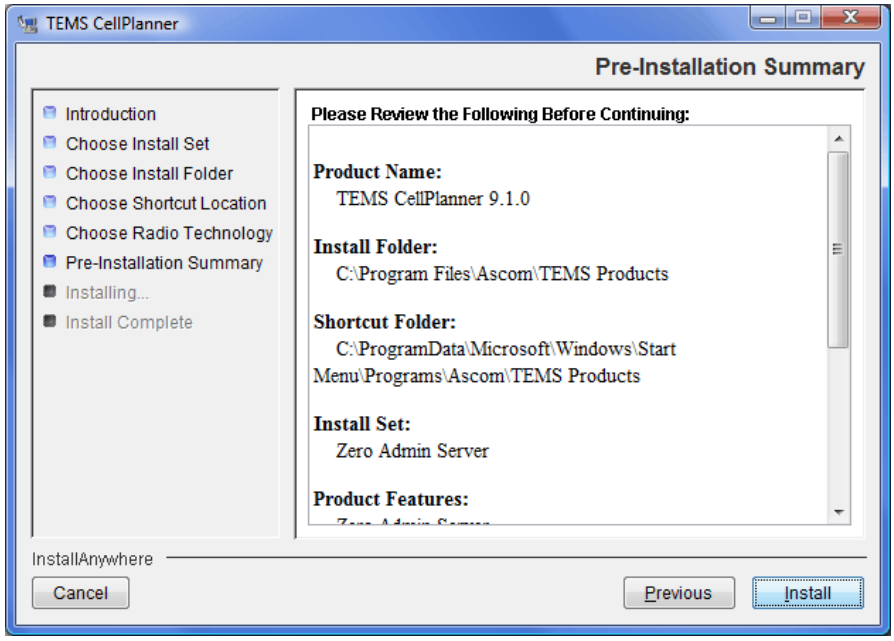
6. Click **Next** to continue. The **Choose Install Folder** window appears:



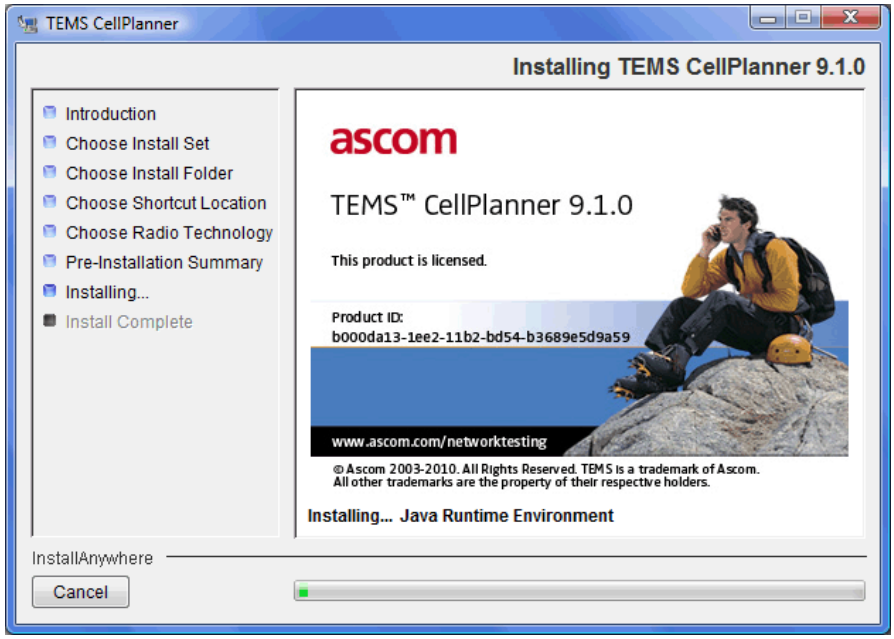
7. Click **Next** to continue. The **Choose Shortcut Location** window appears, as shown in the following example:



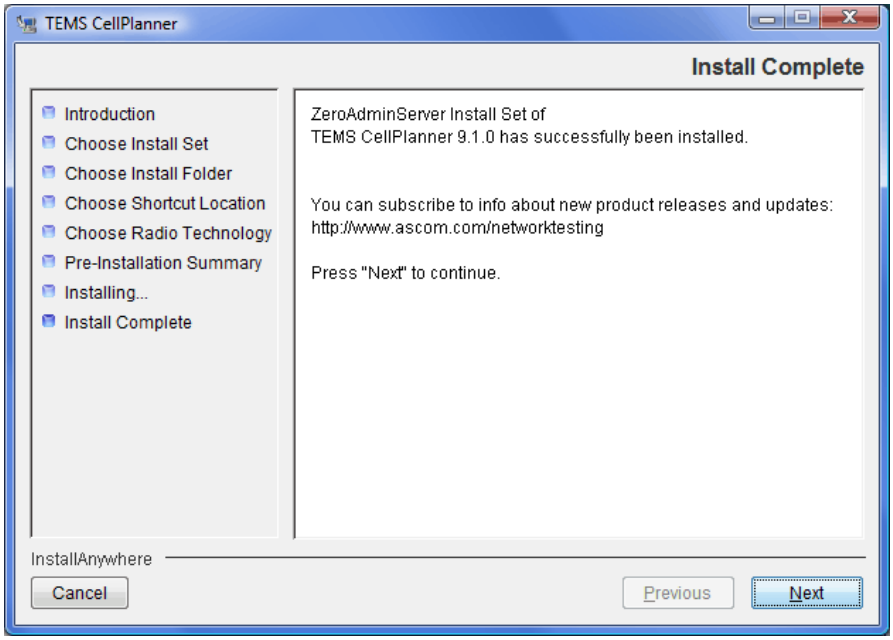
8. Click **Next** and the **Pre-Installation Summary** window appears as in the following example:



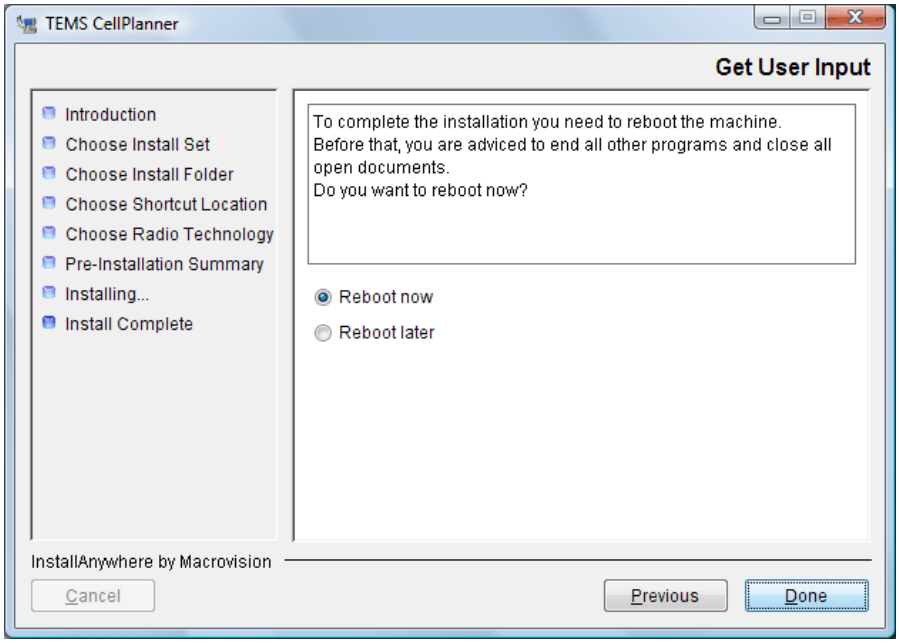
9. Select **Install** to complete the installation. The **Installing** TEMS CellPlanner window appears as shown in the following example:



10. When the installation completes, the **Install Complete** window appears, as in the following example:



11. Click **Done**. The Reboot window appears, asking you to reboot the computer:



12. Reboot is necessary only the first time you install a new version of the Zero Admin Server as environment variables need to be initiated. Select the appropriate reboot option. If you select **Reboot now**, first close all other programs to not lose any data.
13. Click **Done**. If you selected to reboot now, the computer is restarted.

Proceed with Start Zero Admin Server.

12.7 Start Zero Admin Server

You shall now start the TEMS CellPlanner Zero Admin Server to make it possible for Clients to store and access projects on the server.

The Zero Admin Server can be started either as a Windows service - the preferred choice - or as an ordinary process.

12.7.1 A: Start Zero Admin Server as a Windows Service

From TEMS CellPlanner version 8.0 you can register and start the TEMS CellPlanner Zero Admin Server as a Windows service. It is recommended to use this method for a Server installed on Windows 2003, and you can use the same method on any of the other supported operating systems.

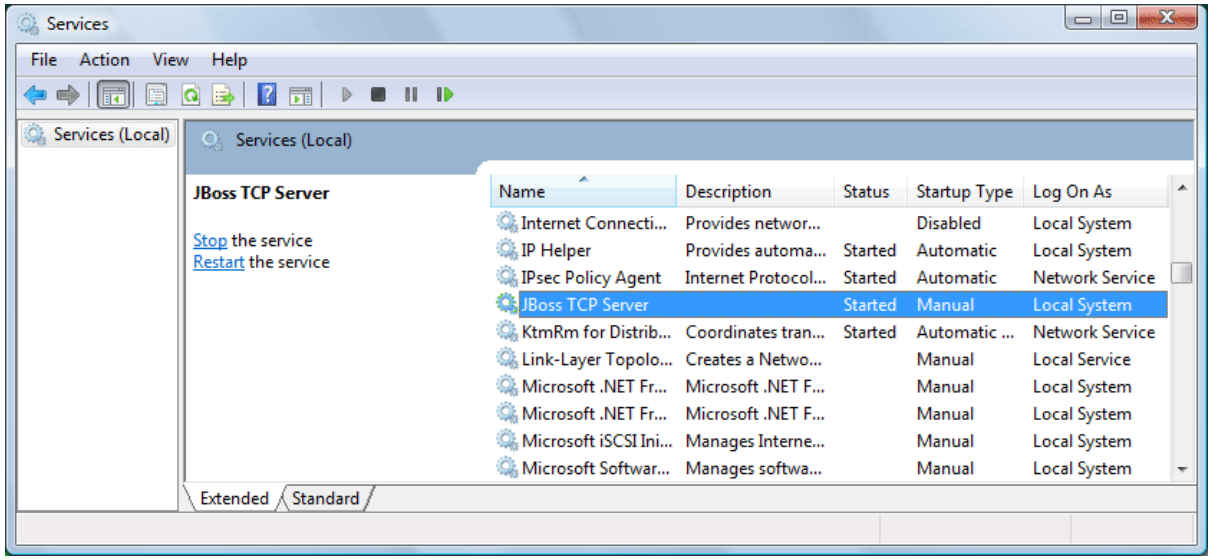
A Windows service is registered in the Windows Control Panel and can be configured to restart automatically at computer restart.

Do as follows to start the TEMS CellPlanner Zero Admin Server as a Windows service:

1. Open the Control Panel.
2. Select Administrative Tools.
3. Select Services. The Services window is opened.
4. To install the Zero Admin Server as a Windows service, do as follows:
   - From the Windows task bar, select **Run**, enter `C:\TCPJBoss\9.1.0\bin\installwrapper.bat` and click **OK**.
   - In the Services window, select **Action↗Refresh**. The JBoss TCP Server appears as a service.

   Note: From TEMS CellPlanner 8.1 this service is a JBoss service. In TCP 8.0 the corresponding name of the service was TCPServer.
5. To start the service, do as follows:
   - In the Services window, right-click on JBoss TCP Server and select Properties.
   - In the JBoss TCP Server Properties window, select startup type Automatic.

- Click **Start** and **OK**. The status column shows that the service is started as in the following example (here in Manual mode, not Automatic):


Services
File Action View Help
Services (Local)
Services (Local)
JBoss TCP Server
Stop the service
Restart the service
Name Description Status Startup Type Log On As
Internet Connecti... Provides networ... Disabled Local System
IP Helper Provides automa... Started Automatic Local System
IPsec Policy Agent Internet Protocol... Started Automatic Network Service
JBoss TCP Server Started Manual Local System
KtmRm for Distrib... Coordinates tran... Started Automatic ... Network Service
Link-Layer Topolo... Creates a Netwo... Manual Local Service
Microsoft .NET Fr... Microsoft .NET F... Manual Local System
Microsoft .NET Fr... Microsoft .NET F... Manual Local System
Microsoft iSCSI Ini... Manages Interne... Manual Local System
Microsoft Softwar... Manages softwa... Manual Local System
Extended Standard

You can now proceed with View JBoss JMX Attributes (Optional).

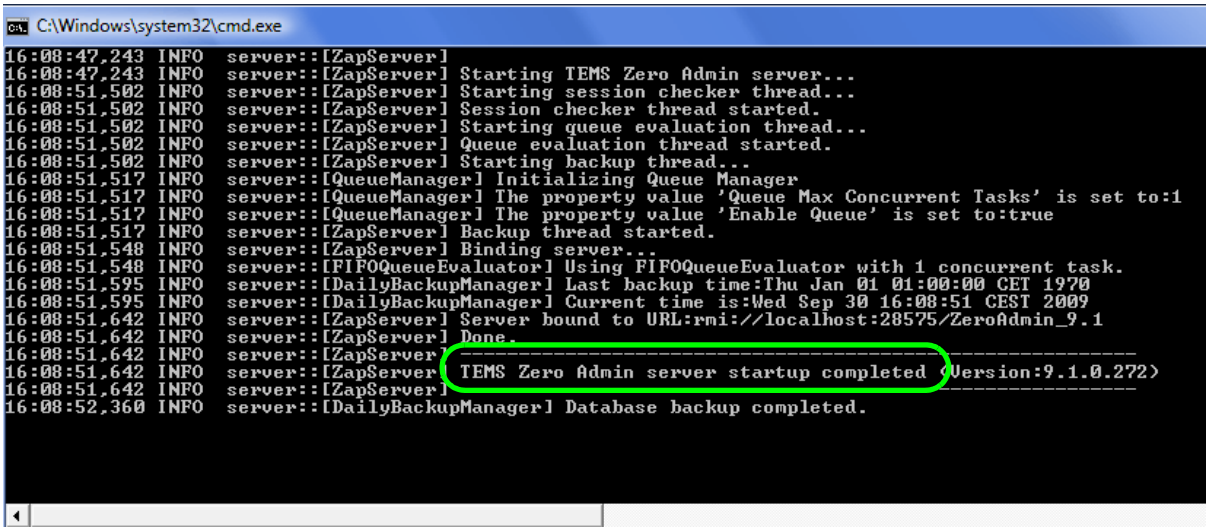
12.7.2 B: Start Zero Admin Server as an Ordinary Process

As an alternative, you may start the TEMS CellPlanner Zero Admin Server as an ordinary process. This process is stopped at logout, it is easily terminated by mistake, and if the computer restarts you must start the Zero Admin Server again. This method is useful while testing the Zero Admin Server, but when users start accessing the Zero Admin Server it is recommended to A: Start Zero Admin Server as a Windows Service.

Do as follows to start the TEMS CellPlanner Zero Admin Server as an ordinary process:

1. Select **Start↗Programs↗Ascom↗TEMS Products↗TEMS CellPlanner <version number>↗Server**, or
   start `C:\TCPJBoss\9.1.0\bin\run.bat` from the **Run** window.
2. The Zero Admin Server starts and reads the configuration file `tcpserver-ds.xml`. The process `java.exe` appears in the **Windows Task Manager**

window and a command window shows the startup progress as in the following example:


C:\Windows\system32\cmd.exe
16:08:47,243 INFO server::[ZapServer]
16:08:47,243 INFO server::[ZapServer] Starting TEMS Zero Admin server...
16:08:51,502 INFO server::[ZapServer] Starting session checker thread...
16:08:51,502 INFO server::[ZapServer] Session checker thread started.
16:08:51,502 INFO server::[ZapServer] Starting queue evaluation thread...
16:08:51,502 INFO server::[ZapServer] Queue evaluation thread started.
16:08:51,502 INFO server::[ZapServer] Starting backup thread...
16:08:51,517 INFO server::[QueueManager] Initializing Queue Manager
16:08:51,517 INFO server::[QueueManager] The property value 'Queue Max Concurrent Tasks' is set to:1
16:08:51,517 INFO server::[QueueManager] The property value 'Enable Queue' is set to:true
16:08:51,517 INFO server::[ZapServer] Backup thread started.
16:08:51,548 INFO server::[ZapServer] Binding server...
16:08:51,548 INFO server::[FIFOQueueEvaluator] Using FIFOQueueEvaluator with 1 concurrent task.
16:08:51,595 INFO server::[DailyBackupManager] Last backup time:Thu Jan 01 01:00:00 CET 1970
16:08:51,595 INFO server::[DailyBackupManager] Current time is:Wed Sep 30 16:08:51 CEST 2009
16:08:51,642 INFO server::[ZapServer] Server bound to URL:rmi://localhost:28575/ZeroAdmin_9.1
16:08:51,642 INFO server::[ZapServer] Done.
16:08:51,642 INFO server::[ZapServer]
16:08:51,642 INFO server::[ZapServer] TEMS Zero Admin server startup completed (Version:9.1.0.272)
16:08:51,642 INFO server::[ZapServer]
16:08:52,360 INFO server::[DailyBackupManager] Database backup completed.

3. Ensure that "`Server startup completed`" is displayed in the command window. The Zero Admin Server is now ready to accept login from TEMS CellPlanner Clients and TEMS CellPlanner User Administration.
4. ***This command window must remain open*** as long as TEMS CellPlanner Clients need access to the database, or the User Administration tool needs access to the Zero Admin Server.

You can now proceed with View JBoss JMX Attributes (Optional) on page 12-15.

12.8 View JBoss JMX Attributes (Optional)

You can manage and monitor the Zero Admin Server remotely using the JMX (Java Management eXtensions) console addressing port 8080.

For more information on the JBoss application server, see http://www.jboss.org.

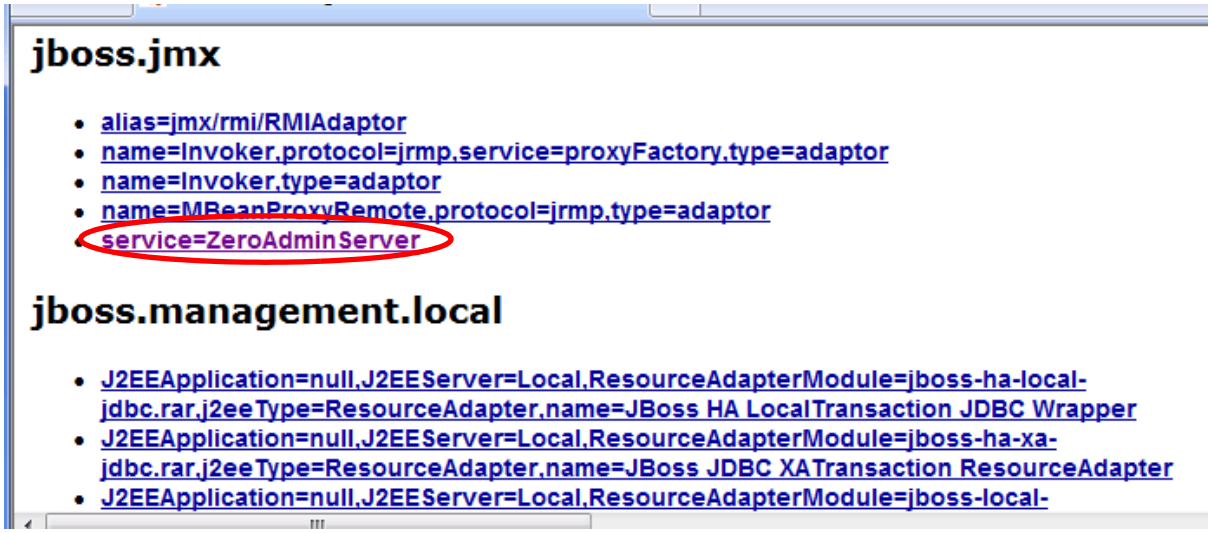
Prerequisites

The Zero Admin Server is started, see Start Zero Admin Server on page 12-12.

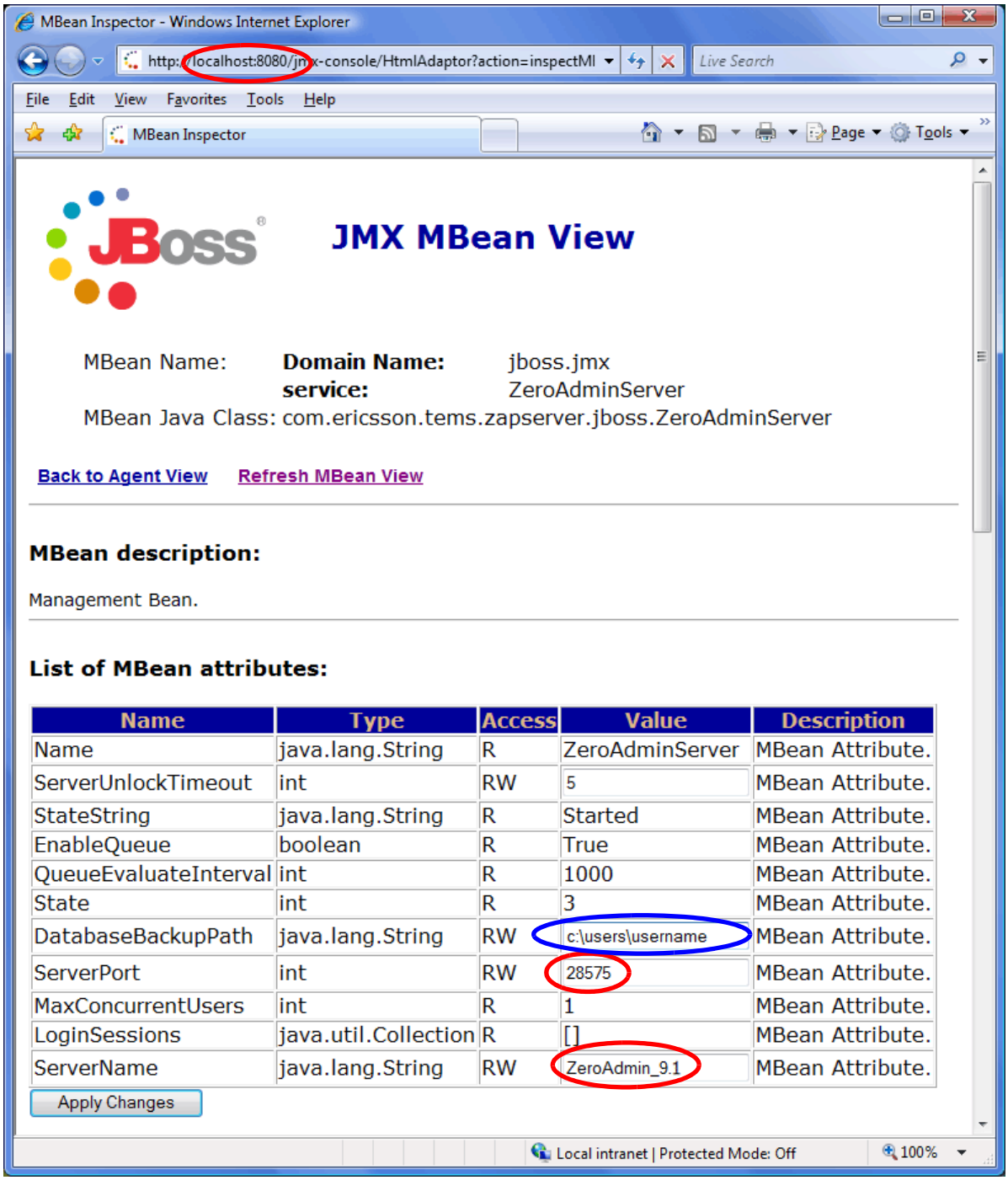
Procedure

1. Open Internet Explorer or a similar application.
2. Go to URL `http://<Zero Admin Server host>:8080`. The JBoss portal window of the addressed host is displayed as in the following example where the host name is "localhost" as the web explorer is opened on the computer where the Zero Admin Server is installed:

3. Click on **JMX Console**. The JBoss JMX Management Console window is displayed as in the following example:



4. Click on the service=ZeroAdminServer link. The JMX MBean window appears as in the following example showing the TEMS CellPlanner Zero Admin Server attributes:


MBean Inspector - Windows Internet Explorer
http://localhost:8080/jmx-console/HtmlAdaptor?action=inspectMBean
Live Search
File Edit View Favorites Tools Help
MBean Inspector
Page Tools
JMX MBean View
MBean Name: Domain Name: jboss.jmx
service: ZeroAdminServer
MBean Java Class: com.ericsson.tems.zapserver.jboss.ZeroAdminServer
Back to Agent View
Refresh MBean View
MBean description:
Management Bean.
List of MBean attributes:
Name | Type | Access | Value | Description
Name | java.lang.String | R | ZeroAdminServer | MBean Attribute.
ServerUnlockTimeout | int | RW | 5 | MBean Attribute.
StateString | java.lang.String | R | Started | MBean Attribute.
EnableQueue | boolean | R | True | MBean Attribute.
QueueEvaluateInterval | int | R | 1000 | MBean Attribute.
State | int | R | 3 | MBean Attribute.
DatabaseBackupPath | java.lang.String | RW | c:\users\username | MBean Attribute.
ServerPort | int | RW | 28575 | MBean Attribute.
MaxConcurrentUsers | int | R | 1 | MBean Attribute.
LoginSessions | java.util.Collection | R | [] | MBean Attribute.
ServerName | java.lang.String | RW | ZeroAdmin_9.1 | MBean Attribute.
Apply Changes
Local intranet | Protected Mode: Off
100%

The "RW" attributes can be modified, "R" attributes are read-only.

You later associate the **host** name (or IP address) in the URL field, and the MBean attributes **ServerName** and **ServerPort** values with a server nickname, see Configure Connection Data and Change Password on page 12-18.

If you modify any attribute you must restart the Zero Admin Server before the new value is taken into account, see Start Zero Admin Server on page 12-12. You must also ensure that the local connection data match the MBean attributes, see Configure Connection Data and Change Password on page 12-18.

12.9 Configure Backup Location for Zero Admin Server

Backups in Zero Admin Server will be placed in the folder specified by the JBoss JMX attribute **DatabaseBackupPath**, which initially is set to your home directory.

For increased robustness it is recommended that you modify **DatabaseBackupPath** to another folder location, preferably to another physical media. In case of disk failure or corruption, the probability for recovery is much higher if data is backed up to another physical disk than the actual database.

See View JBoss JMX Attributes (Optional) on page 12-15 for information on how to change JMX attributes. The value of **DatabaseBackupPath** is marked in blue color.

12.10 Configure Connection Data and Change Password

After having started TEMS CellPlanner Zero Admin Server 9.1, you can login to the Zero Admin Server as an administrative user to configure local connection data on this computer and change the ADMIN password in the Zero Admin Server.

The local connection data will be used as a lookup table when connecting to a certain Zero Admin Server in the network.

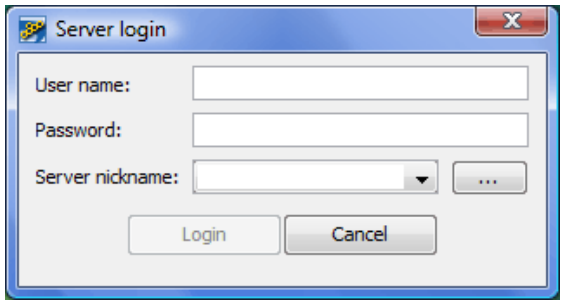
Prerequisites

- The server is up and running, see Start Zero Admin Server on page 12-12.
- The TEMS CellPlanner User Administration tool is installed. It is installed together with the Zero Admin Server but can be explicitly installed on any computer, see Installing the User Administration Tool on page 13-1.
- You are authorized to login as administrator on the Zero Admin Server.

Procedure

Follow these steps to initiate the Zero Admin Server:

1. Login to the computer from where you will administer the Zero Admin Server. It might be the same computer as the one where Zero Admin Server is installed, or any other computer in the network.
2. Login to the TEMS CellPlanner User Administration tool by selecting **Programs↗Ascom↗TEMS Products↗TEMS CellPlanner 9.1.0↗User Administration** from the start menu. An empty dialog is displayed the first time you open this window.



3. Configure Local Connection Data
4. Recommended: Login to the Zero Admin Server and Change Password

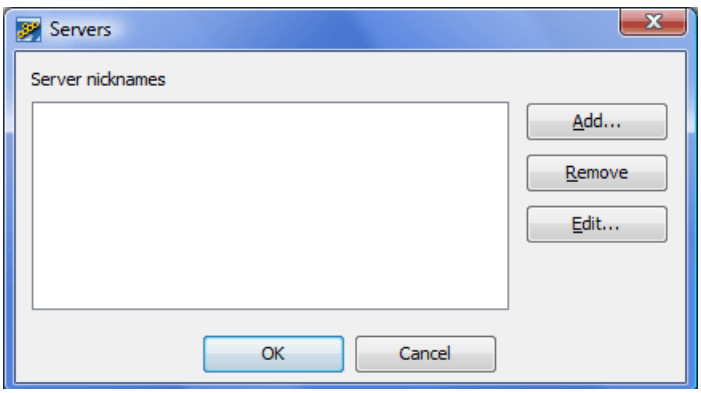
If you are upgrading, proceed with Import Projects and Account Information on page 12-22.

12.10.1 Configure Local Connection Data

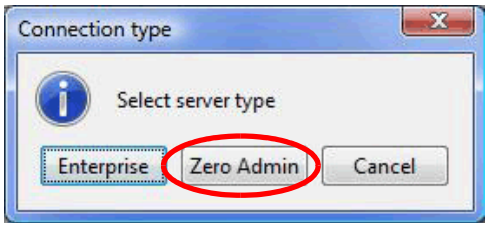
The local connection data is a locally stored record associating a nickname with the real location of a Zero Admin Server. You need one connection data record per Zero Admin Server that will be accessed from this computer.

When you have opened the User Administration tool, do as follows:

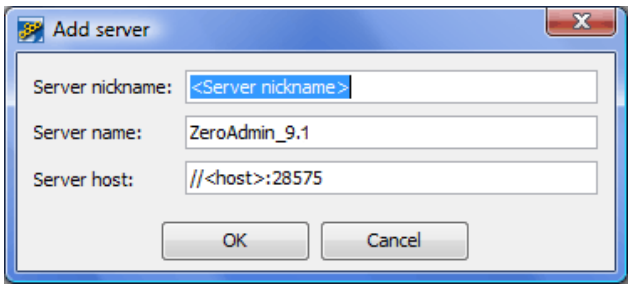
1. Click ... at the **Server nickname**. The **Servers** window lists all configured connections towards Zero Admin Servers on any host. The example below shows the initial case with no servers displayed:



2. Click **Add** and select **Zero Admin,** the server type you want to connect to:



3. The **Add server** window appears with default values:



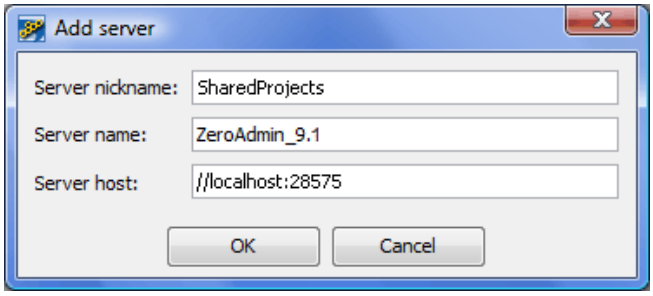
4. Here you associate a nickname with a Zero Admin Server installed somewhere in the network. When a client logs into a server named <**Server nickname**>, it will be connected to the <**Server name**> service on the <**Server host**>.

   The initial settings of the parameters in the **Add server** window are taken from the JMX attributes on the local computer, see View JBoss JMX Attributes (Optional) on page 12-15:

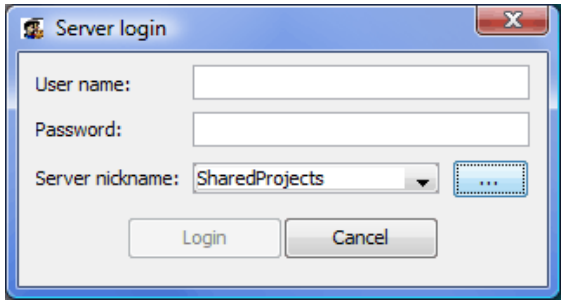
Server nickname	Your easy-to-remember and unique name of the Zero Admin Server. Modify as you like.
Server name	Logical name of the JBoss Server instance. Must match the JMX MBean attribute **ServerName** on the addressed **Server host**.
Server host	URL to addressed TEMS CellPlanner Zero Admin Server. Syntax: `//<host>:<port>` `<host>` = Host part of the URL in the JMX Console address field. Enter `localhost` if the Zero Admin Server is installed on the same computer as the User Administration tool you are currently running. `<port>` = Port of the TEMS CellPlanner Zero Admin Server. Must match the host's JMX Mbean attribute **ServerPort** of the service (**Server name**).

   Enter a **Server nickname** and the IP address or name of the **Server host** where the Zero Admin Server is installed. *Advanced: If you have modified the port number in the JMX attributes, you must also modify the port of the **Server host** accordingly.*

The figure below shows an example of an updated connection configuration:



5. Click **OK** twice to get back to the **Server login** window.

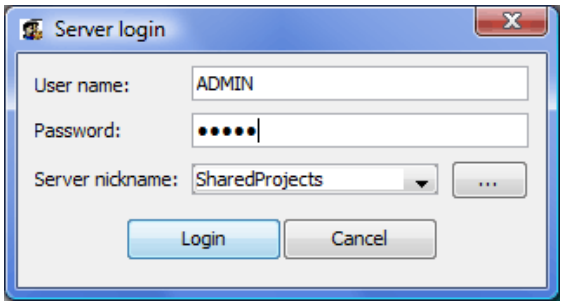


After this it is recommended to Login to the Zero Admin Server and Change Password to test your connection data, and to choose a safer password.

12.10.2 Login to the Zero Admin Server and Change Password

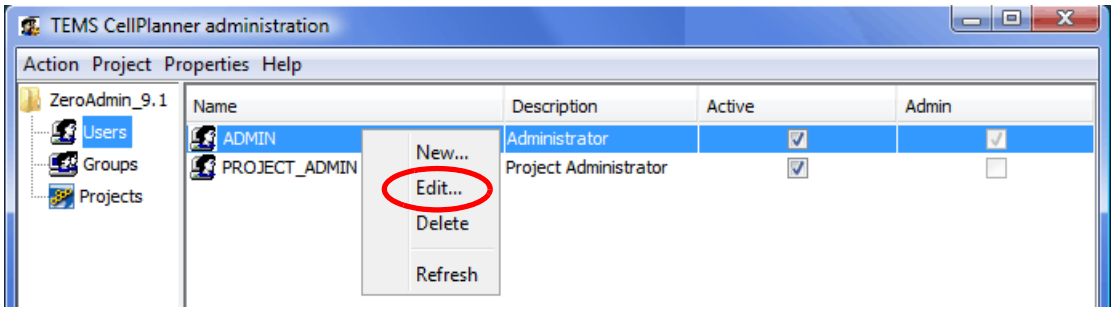
After Configure Local Connection Data, do as follows:

1. Enter the initial administrator user name ADMIN and initial password ADMIN. The input fields are case sensitive.



2. Click **Login.** The TEMS CellPlanner administration window opens.

3. Right-click on ADMIN, select **Edit** and change ADMIN's password:



4. From this window you can also add users and user groups, set permissions, and assign administrative rights to other users than ADMIN. For complete information on how to administer users and projects, see the *TEMS CellPlanner Common Features User's Guide*, chapter *Administration of* TEMS CellPlanner.

Important: Do not forget to record the new password of ADMIN and possible new administrative accounts! If no one can login as administrator, contact TEMS Support for advise. In worst case you have to reinstall the Zero Admin Server and reenter users and projects from scratch.

12.11 Import Projects and Account Information

After Start Zero Admin Server it is time to complete an initiated migration. If you have exported projects to read back into the database, optionally together with account information for the Zero Admin Server, follow the instructions from Migrate DB, Part IV: Import Projects (and Accounts) in Migrate Database (DB) to TEMS CellPlanner 9.1.

12.12 Cancel Installation

You can cancel the installation at any time:

1. Click **Cancel** and the Cancel Installation window appears as shown in the following example:

Cancel Installation
Installation Not Complete
If you cancel the installation now, TEMS CellPlanner 9.1.0 will not be installed. To continue with the installation, click 'Resume'. To cancel the installation, click 'Quit'.
Quit
Resume

2. Select **Resume** to proceed with the installation.
3. Select **Quit** to stop the installation.

13
Installing the User Administration Tool

This chapter describes procedures for installing the TEMS CellPlanner User Administration tool.

Topics **Page**

About the User Administration Tool 13-2
Install the User Administration Tool 13-3
Cancel Installation 13-7

13.1 About the User Administration Tool

The User Administration is a tool used by the TEMS CellPlanner administrator to do the following:

- Register and manage user accounts in the TEMS CellPlanner Enterprise Server or Zero Admin Server.
- Export TEMS CellPlanner projects in database and the account information of the projects to XML file, for smooth migration at upgrade (possible from TEMS CellPlanner 8.0).
- Import TEMS CellPlanner projects and account information from XML file, for smooth migration at upgrade (possible from TEMS CellPlanner 8.0).

Note: *Only projects and account information exported to XML can be imported via the TEMS CellPlanner User Administration tool.*

For information on where this tool can be installed, see Overview of the User Administration Tool on page 9-5.

How to export and import projects and account information is described in the *TEMS CellPlanner Common Features User's Guide*.

13.2 Install the User Administration Tool

Use this procedure to install the TEMS CellPlanner User Administration tool.

Prerequisites

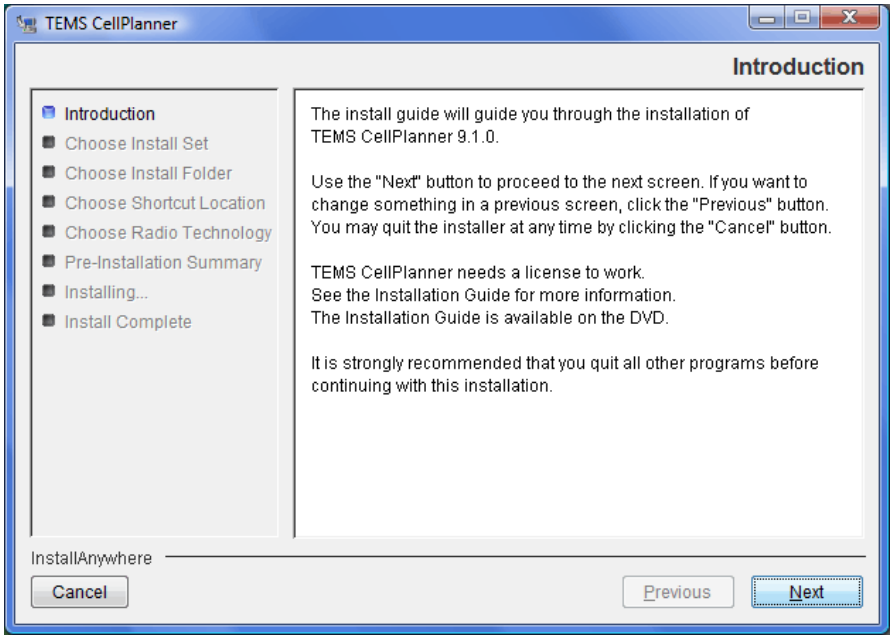
You must have administrator privileges on the computer.

Procedure

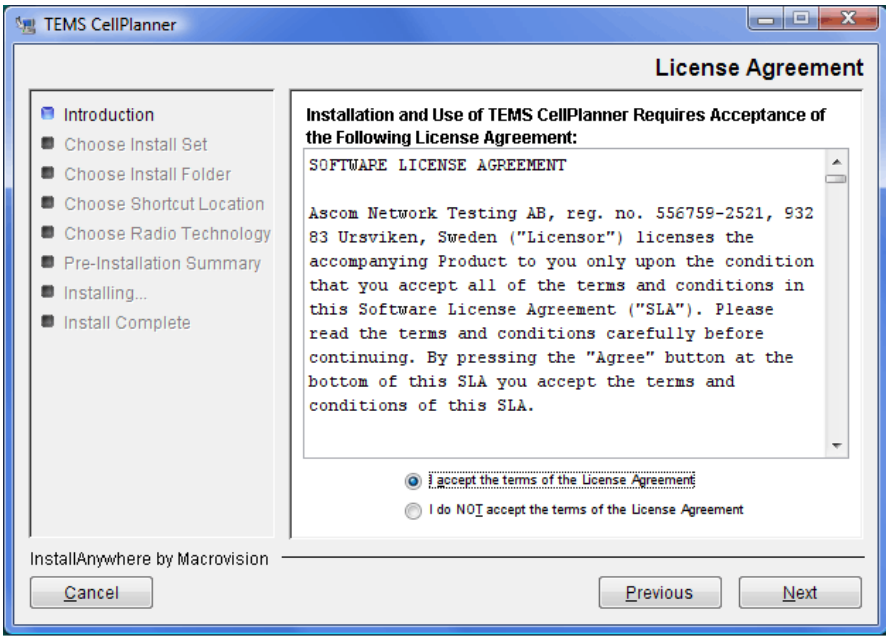
1. Start the installation according to how the software is packaged.

Downloaded:	Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`
On DVD:	Place the TEMS CellPlanner DVD in the DVD drive. If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

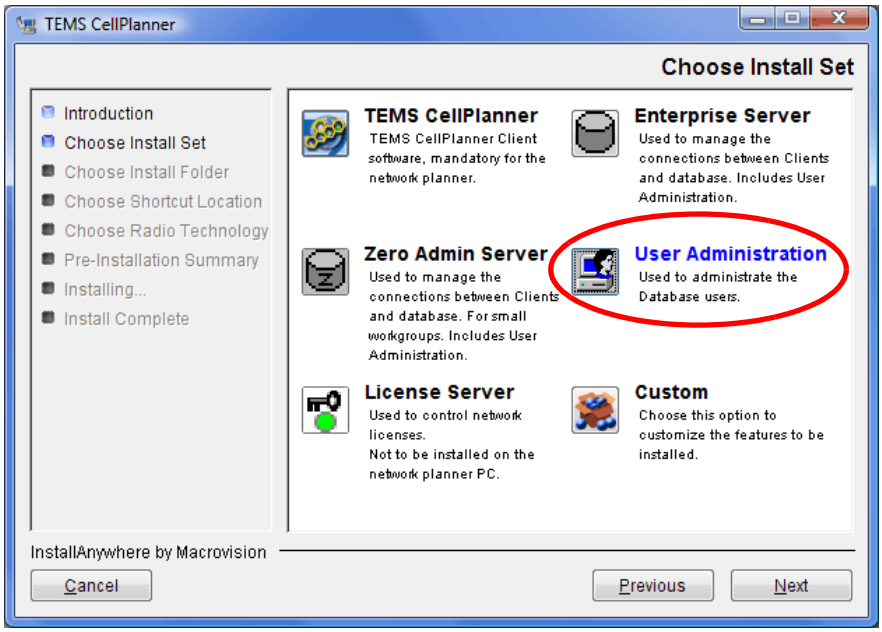
2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:


TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

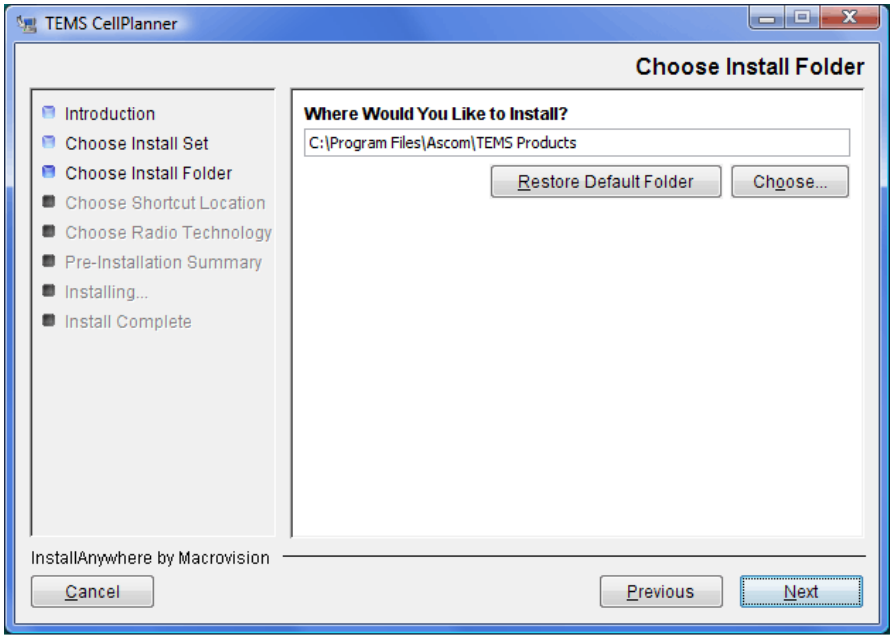
3. Click **Next**. The **License Agreement** window appears, as in the following example:


TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

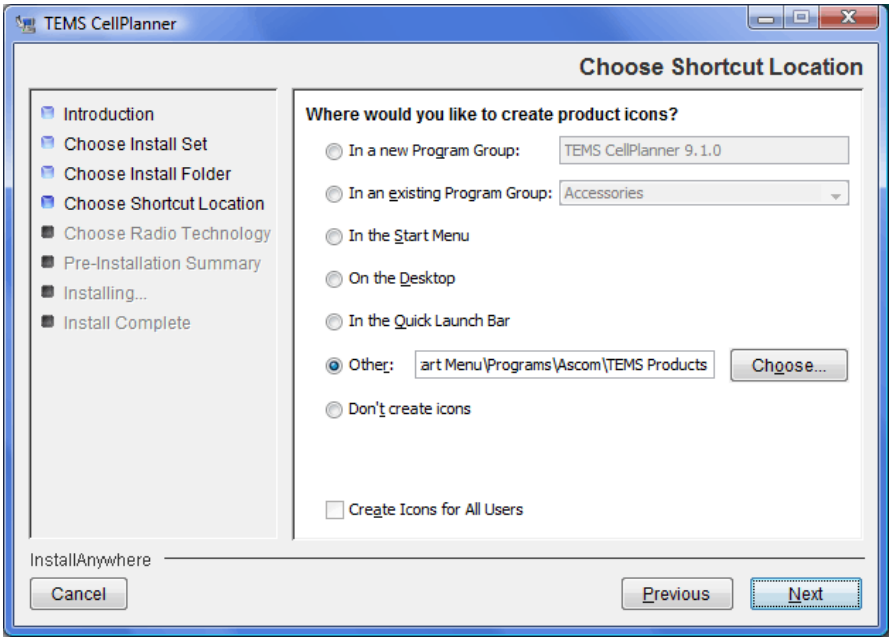
4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next**. The **Choose Install Set** window appears. Select **User Administration**, as in the following example:


TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

5. Click **Next**. The **Choose Install Folder** window appears, as shown in the following example:

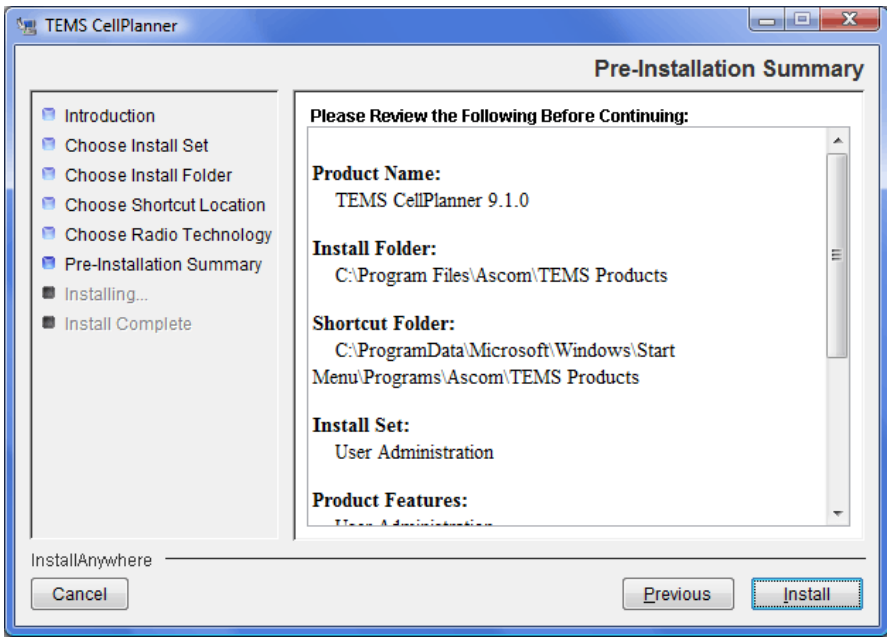


6. The default installation folder is `C:\<Program Files>\TEMS Products`. Enter another folder name if you want to install the TEMS CellPlanner application elsewhere. Click **Next** to continue. The **Choose Shortcut Location** window appears as in the following example:

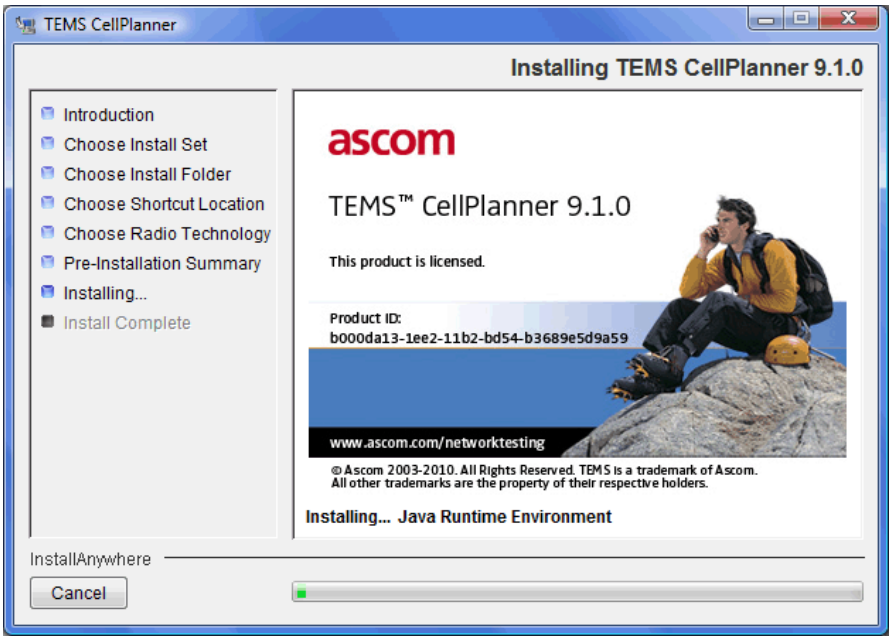


The Program Group is the installation folder selected in previous window.

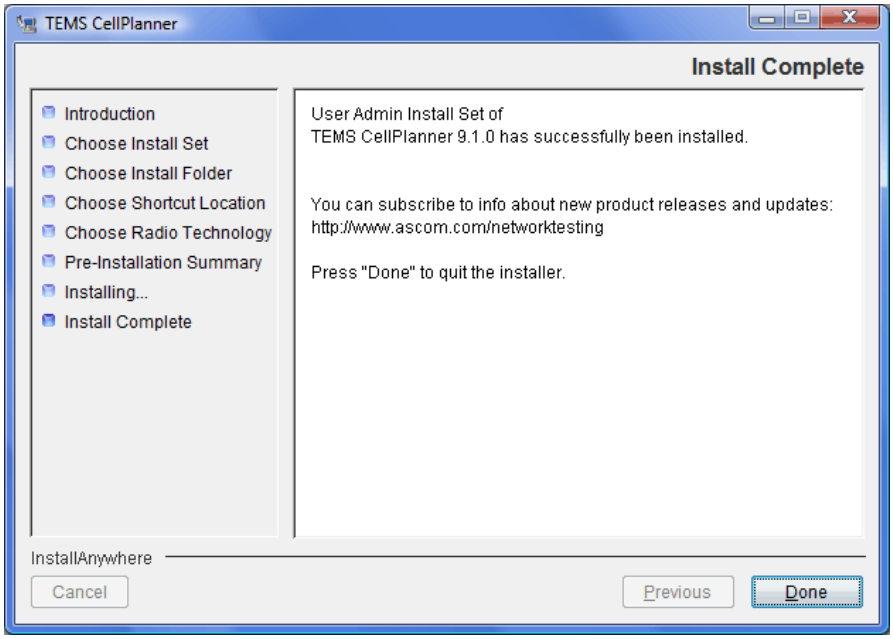
7. Choose where you would like to install TEMS CellPlanner 9.1. If you have installed older versions of TEMS CellPlanner in the selected program group, this version will by default be installed in a unique subfolder. Click **Next** to continue and the **Pre-Installation Summary** window appears as shown in the following example:



8. Select **Install** to complete the installation. The **Installing** TEMS CellPlanner window appears as shown in the following example:



9. The **Install Complete** window appears:

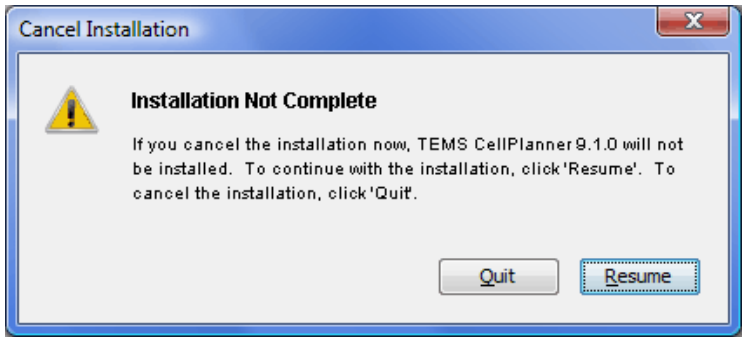


10. Any problem with the installation is displayed on this window. Take action if needed or just proceed.
11. Click **Done** to complete the installation.

13.3 Cancel Installation

You can cancel the installation at any time:

1. Click **Cancel** and the Cancel Installation window appears as shown in the following example:


Cancel Installation
Installation Not Complete
If you cancel the installation now, TEMS CellPlanner 9.1.0 will not be installed. To continue with the installation, click 'Resume'. To cancel the installation, click 'Quit'.
Quit
Resume

2. Select **Resume** to proceed with the installation.
3. Select **Quit** to stop the installation.

14
Installing License Server

This chapter describes how to install the TEMS CellPlanner License Server software.

TEMS CellPlanner License Server shall be installed *only* if network licenses will be used by TEMS CellPlanner Clients.

Topics **Page**

About the License Server 14-2
Before Installing the License Server 14-2
Install License Server 14-3
Install Network License File 14-5
Log License Server Usage 14-6
Cancel Installation 14-6
Uninstall License Server 14-7

14.1 About the License Server

The TEMS CellPlanner License Server is a software controlling the *network licenses*, defined by license files on a *license server*.

For more information on TEMS CellPlanner License Server, see Overview of the License Server on page 9-4.

For a complete description of network licenses, see chapter *Licenses* in the *TEMS CellPlanner Common Features User's Guide*.

14.2 Before Installing the License Server

You must install a TEMS CellPlanner License Server only if any user needs a network license. You do not need the License Server if all TEMS CellPlanner Clients use stand-alone licenses.

If a previous version of the License Server is already installed, you do not need to re-install it.

If you install the License Server by mistake, for example on a TEMS CellPlanner Client computer, see Uninstall License Server on page 14-7 about how to remove it.

14.3 Install License Server

Use this procedure to install the TEMS CellPlanner License Server software on a license server computer.

If a License Server software is already installed, you do not need to upgrade it.

Do not install the License Server on a TEMS CellPlanner Client computer.

Prerequisites

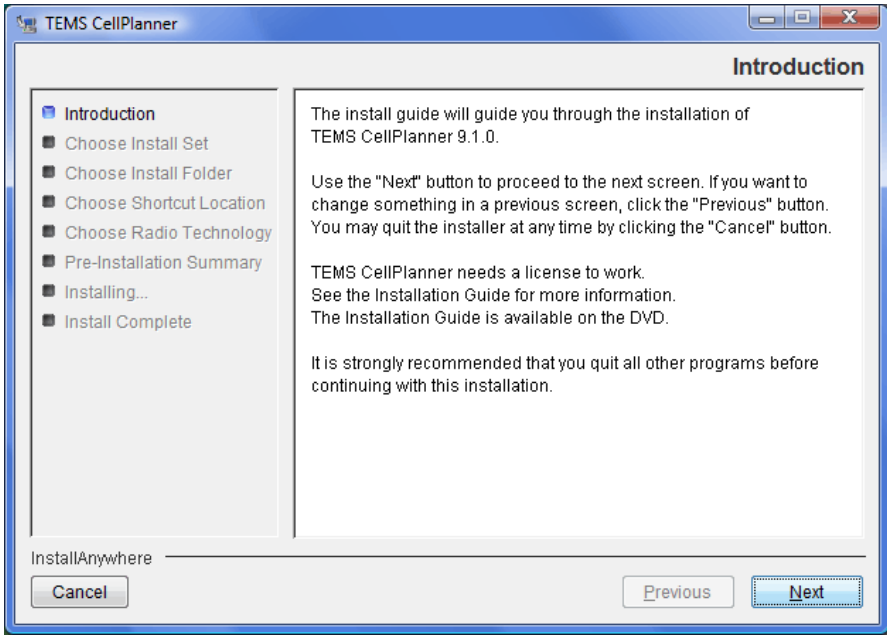
- No License Server is installed.
- You must have administrator privileges.
- If a USB dongle locked license shall be used, the dongle must be connected to a USB port.

Procedure

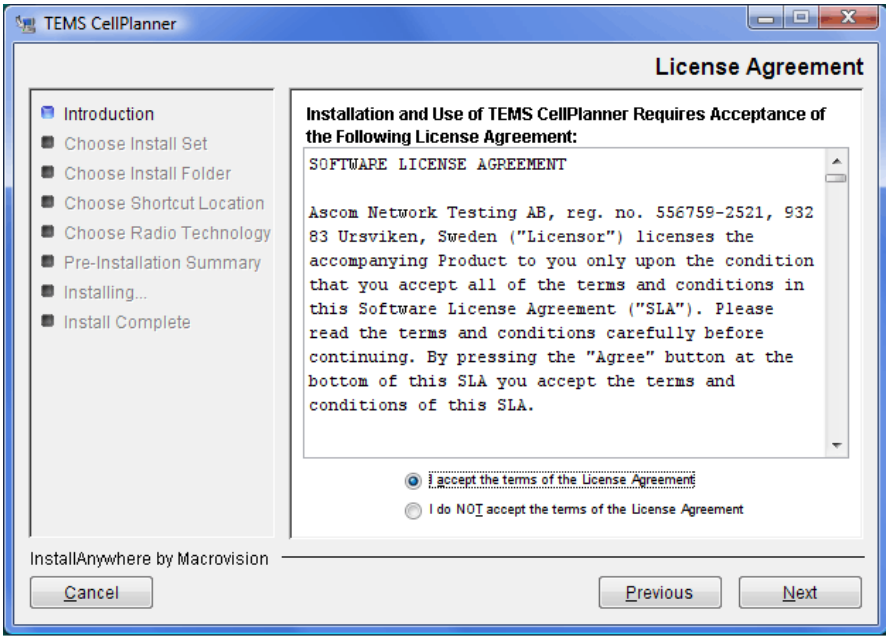
1. Start the installation according to how the software is packaged.

Downloaded:	Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`
On DVD:	Place the TEMS CellPlanner DVD in the DVD drive. If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:


TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

3. Click **Next**. The **License Agreement** window appears, as shown in the following example:


TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next**. The **Choose Install Set** window appears, as shown in the following example:

TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

5. Select **License Server** and click **Next**. The installation starts and the **Sentinel Service Setup** window appears.
6. Select the default installation target directory for Sentinel Service software and click **Next**. The directory is created if not already existing. Example of default installation directory:

   `C:\<Program Files>\Ascom\Sentinel Service`

7. Depending on what is previously installed on your computer, you might be prompted to disconnect or connect a USB dongle. These messages are relevant only if you have a USB dongle locked license. Just follow the instructions in the installation wizard.
8. You are prompted to restart the computer now or later. Select to restart the computer now to avoid problems with licenses.

Proceed with Install Network License File on page 14-5.

14.4 Install Network License File

You might need new network licenses for the new version of the TEMS CellPlanner License Server.

See When to Install New Licenses on page 6-3 to find out if new network licenses are needed.

Follow the instructions from Acquire License File on page 6-6 and onwards to install new licenses.

14.5 Log License Server Usage

You can log the use of the License Server by setting the environment variable `LSERVOPTS`, which is read by the Sentinel Service. The logging includes user id, date and time for allocating and releasing licenses.

To enable logging, do as follows:

1. Log on to the License Server using an account with administrator rights.
2. Open the **Control Panel** and select **Advanced system settings**.
3. Select the **Advanced** tab.
4. Click the **Environment Variables** button.
5. Under **System variables**, click the **New** button.
6. Enter `LSERVOPTS` as **Variable name**.
7. Enter `-l <file name>` as **Variable value**. The "`l`" is a lower case L, and the file name shall include the full path. Example:

   ```
   -l C:\usage.log
   ```

   The security properties of the path and file must include write permission.
8. Reboot the computer.

Verify that the logging works by starting and stopping a TEMS CellPlanner client using network licenses on the License Server, and view the log file in a text editor.

Chapter *Server Usage Logging* in the Sentinel manual describes the logging in detail.

14.6 Cancel Installation

You can cancel the installation at any time:

1. Click **Cancel** and the Cancel Installation window appears as shown in the following example:

Cancel Installation
Installation Not Complete
If you cancel the installation now, TEMS CellPlanner 9.1.0 will not be installed. To continue with the installation, click 'Resume'. To cancel the installation, click 'Quit'.
Quit
Resume

2. Select **Resume** to proceed with the installation.
3. Select **Quit** to stop the installation.

14.7 Uninstall License Server

The TEMS CellPlanner License Server software shall not be installed in a client PC using TEMS CellPlanner Client software.

If you install the License Server by mistake, go to the **Control Panel**, choose **Programs and Features**, and uninstall the License Server.

15
Installing Multiple Components

This chapter describes how to customize the installation of TEMS CellPlanner to install a number of product components at the same time.

Topics **Page**

Install Multiple TEMS CellPlanner Components 15-2

15.1 Install Multiple TEMS CellPlanner Components

Use this procedure to customize the TEMS CellPlanner installation program to install a number of TEMS CellPlanner components at the same time.

See Overview of TEMS CellPlanner Components for a list of installable application components.

Prerequisites

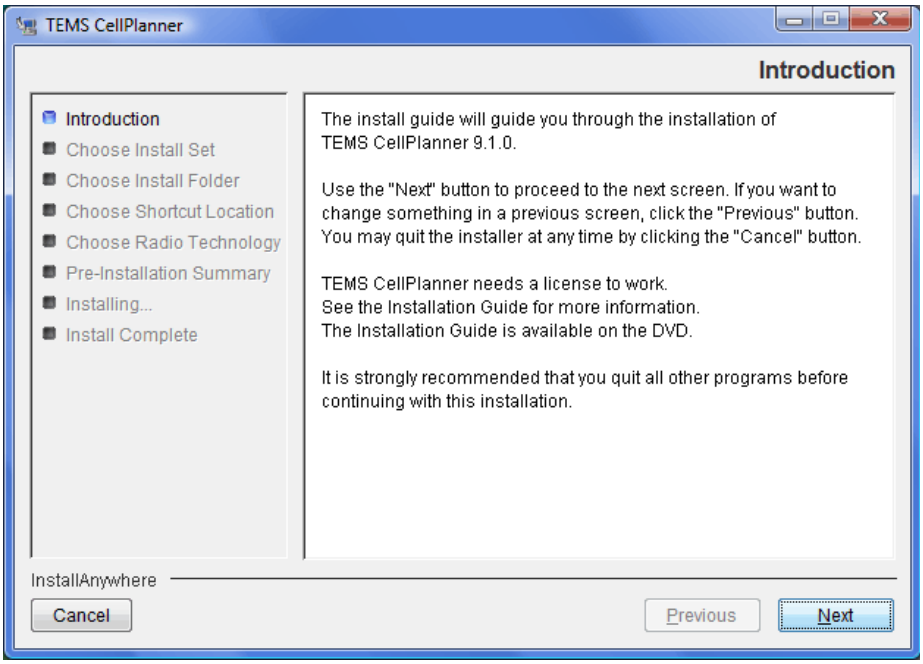
You must have administrator privileges on the computer.

Procedure

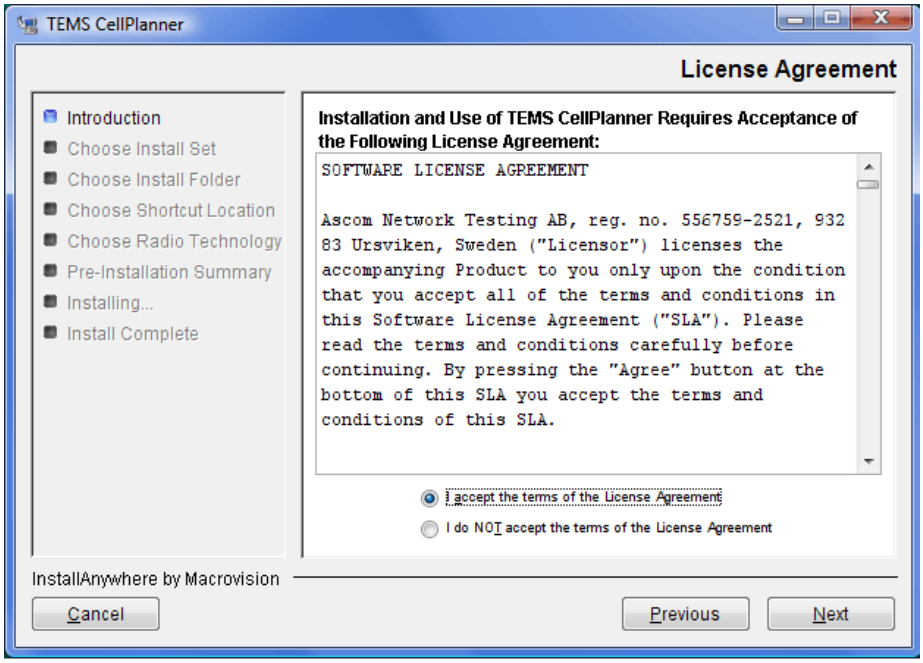
1. Start the installation according to how the software is packaged.

Downloaded:	Select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `C:\Install_TEMS_CellPlanner_9.1.0_001.exe`
On DVD:	Place the TEMS CellPlanner DVD in the DVD drive. If the installation does not start (autorun disabled), select **Run** from the Start menu, and enter path and file name of the installation file as in the following example: `D:\Install_TEMS_CellPlanner_9.1.0_001.exe`

2. The installation starts and the TEMS CellPlanner **Introduction** window appears, as shown in the following example:


TEMS CellPlanner
Introduction
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
The install guide will guide you through the installation of TEMS CellPlanner 9.1.0.
Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
TEMS CellPlanner needs a license to work.
See the Installation Guide for more information.
The Installation Guide is available on the DVD.
It is strongly recommended that you quit all other programs before continuing with this installation.
InstallAnywhere
Cancel
Previous
Next

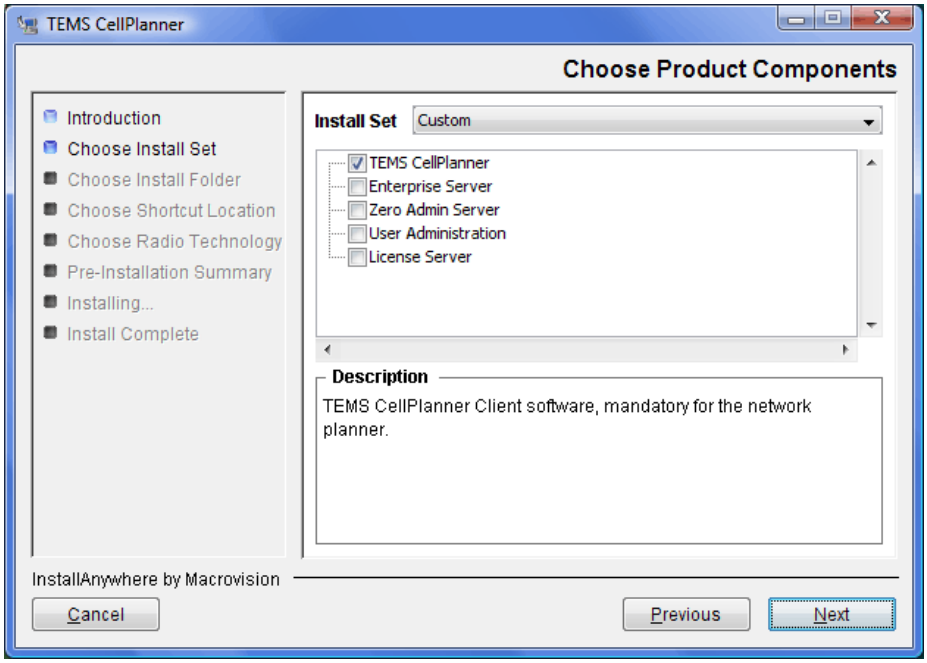
3. Click **Next**. The **License Agreement** window appears, as shown in the following example:


TEMS CellPlanner
License Agreement
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
Installation and Use of TEMS CellPlanner Requires Acceptance of the Following License Agreement:
SOFTWARE LICENSE AGREEMENT
Ascom Network Testing AB, reg. no. 556759-2521, 932 83 Ursviken, Sweden ("Licensor") licenses the accompanying Product to you only upon the condition that you accept all of the terms and conditions in this Software License Agreement ("SLA"). Please read the terms and conditions carefully before continuing. By pressing the "Agree" button at the bottom of this SLA you accept the terms and conditions of this SLA.
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
InstallAnywhere by Macrovision
Cancel
Previous
Next

4. If you agree to the terms of the license agreement, select the **I accept...** option and click **Next**. The **Choose Install Set** window appears. Select **Custom**, as shown in the following example:

TEMS CellPlanner
Choose Install Set
Introduction
Choose Install Set
Choose Install Folder
Choose Shortcut Location
Choose Radio Technology
Pre-Installation Summary
Installing...
Install Complete
TEMS CellPlanner
TEMS CellPlanner Client software, mandatory for the network planner.
Enterprise Server
Used to manage the connections between Clients and database. Includes User Administration.
Zero Admin Server
Used to manage the connections between Clients and database. For small workgroups. Includes User Administration.
User Administration
Used to administrate the Database users.
License Server
Used to control network licenses.
Not to be installed on the network planner PC.
Custom
Choose this option to customize the features to be installed.
InstallAnywhere by Macrovision
Cancel
Previous
Next

5. Click **Next**. The **Choose Product Components** window is displayed. The TEMS CellPlanner Client is selected by default:



6. Select the product components to install at the same time and click **Next**.
7. The installation proceeds by installing the selected components. Refer to the other chapters in this installation guide for more information on installation of each component.

16
Uninstalling TEMS CellPlanner Components

This chapter describes how to uninstall TEMS CellPlanner software.

Topics **Page**

Uninstall Selected TEMS CellPlanner Components 16-2
Uninstall All TEMS CellPlanner Components 16-3

16.1 Uninstall Selected TEMS CellPlanner Components

Use this procedure to uninstall selected components of the TEMS CellPlanner software.

Before Uninstalling - Instruction for All Users

- You must have administrator privileges on the computer.
- Close the TEMS CellPlanner program(s) you will uninstall.

Before Uninstalling - Instruction for Administrators

- If you will uninstall the License Server, ensure that nobody is using its licenses.
- If you will uninstall the Enterprise Server or Zero Admin Server software:
  - If you want to reuse projects and accounts stored via the server, you must Export Projects and Account Information, you will otherwise lose projects and account information. (If you by mistake uninstall the server software you can recover by reinstalling the same server software version and perform the export before you uninstall again).
  - Inform users to stop working with projects on server and stop the server, see Stop Enterprise Server or Stop Zero Admin Server.

Procedure

1. From the **Start menu**, open the **Control panel** and select **Programs.**
2. Select **Uninstall a program**.
3. Select the **TEMS CellPlanner** version to uninstall and double-click.
4. The **Uninstall TEMS CellPlanner** window appears.
5. Click **Next**.
6. Select **Uninstall Specific Features** and click **Next.**
7. Unselect the software components you want to uninstall and click **Next**. The uninstallation starts.
8. When the uninstallation completes, you will be prompted to reboot the computer if required. You can choose to reboot now or later.

16.2 Uninstall All TEMS CellPlanner Components

Use this procedure to uninstall all components of the TEMS CellPlanner software.

Before Uninstalling - Instruction for All Users

- You must have administrator privileges on the computer.
- Close all TEMS CellPlanner programs.

Before Uninstalling - Instruction for Administrators

- If you will uninstall the License Server, ensure that nobody is using its licenses.
- If you will uninstall the Enterprise Server or Zero Admin Server software:
  - If you want to reuse projects and accounts stored via the server, you must Export Projects and Account Information, ***you will otherwise lose projects and account information***. (If you by mistake uninstall the server software you can recover by reinstalling the same server software version and perform the export before you uninstall again).
  - Inform users to stop working with projects on server and stop the server, see Stop Enterprise Server or Stop Zero Admin Server.

Procedure

1. From the **Start menu**, open the **Control panel** and select **Programs.**
2. Select **Uninstall a program**.
3. Select the **TEMS CellPlanner** version to uninstall and double-click.
4. The **Uninstall TEMS CellPlanner** window appears.
5. Click **Next**.
6. Select **Complete Uninstall.**

   Caution: You will not be prompted to confirm the uninstallation, so be really sure before you proceed!

7. Click **Next.** The uninstallation starts.
8. When the uninstallation completes, you will be prompted to reboot the computer if required. You can choose to reboot now or later.

17
TEMS CellPlanner in a Citrix Environment

This chapter describes how to install and use TEMS CellPlanner in a Citrix environment.

Topics **Page**

About TEMS CellPlanner in a Citrix Environment 17-2
- Network View in Citrix Environment 17-2
- Definition of Citrix Environment 17-3
- Problems with Using C: in a Citrix Farm 17-3
- Environment Variables in Citrix Environment 17-3
- Memory Reservation in Citrix Environment 17-3

Prepare for TEMS CellPlanner in a Citrix Environment 17-4

Install TEMS CellPlanner Client on a Citrix Server 17-4

Use TEMS CellPlanner in a Citrix Environment 17-7

17.1 About TEMS CellPlanner in a Citrix Environment

17.1.1 Network View in Citrix Environment

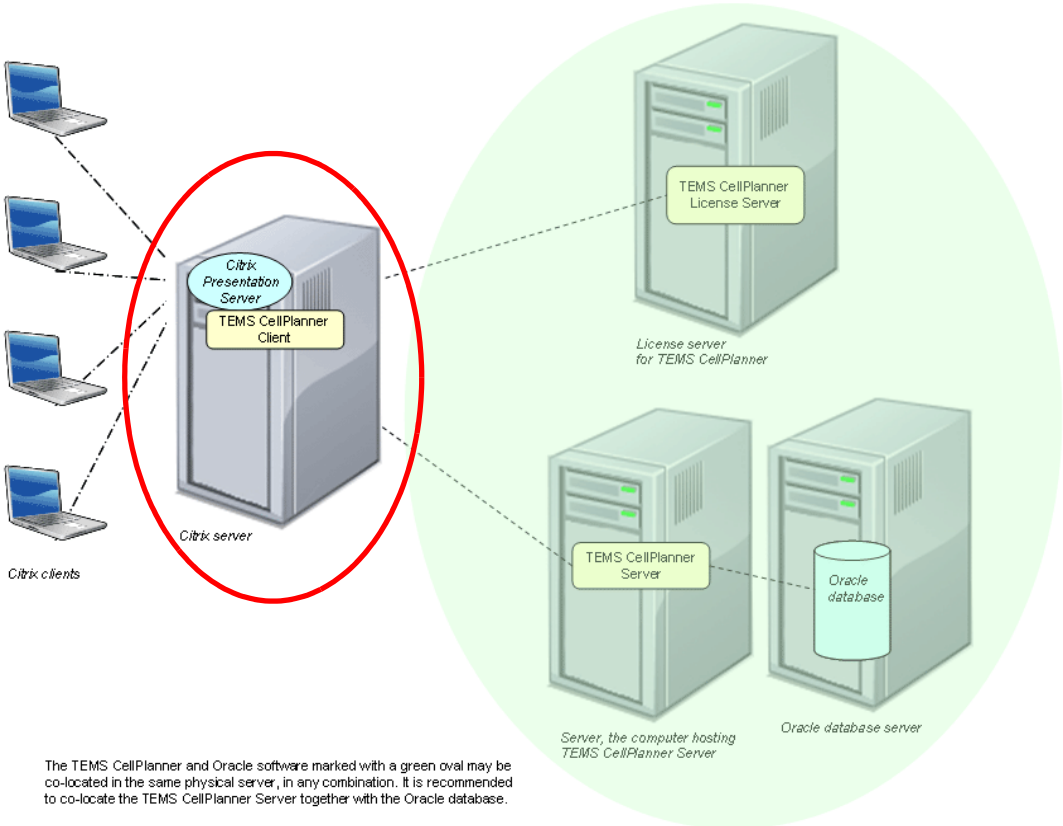
A *Citrix server* is a computer with applications, for example a TEMS CellPlanner Client, published to users in remote clients. In a *Citrix farm*, the TEMS CellPlanner Client is installed on multiple Citrix servers and a Citrix client is logged on to any Citrix server with available capacity.

A *Citrix client* is any computer on any operating system connecting to a Citrix server with the desired application.

Using TEMS CellPlanner Client on a Citrix server off-loads your clients from heavy operations, such as coverage and capacity analysis.

It is advised to co-locate the geodata files (map data with geographic information) with the TEMS CellPlanner Client to reduce network load and increase performance. For the same reason, if you install TEMS CellPlanner Clients in a Citrix farm, you should copy the geodata files to each Citrix server.

The figure below shows an example of a TEMS CellPlanner Citrix environment:



The TEMS CellPlanner and Oracle software marked with a green oval may be co-located in the same physical server, in any combination. It is recommended to co-locate the TEMS CellPlanner Server together with the Oracle database.

17.1.2 Definition of Citrix Environment

The TEMS CellPlanner Client behaves differently in a Citrix environment compared to a non-Citrix environment. The definition of a Citrix environment from a TEMS CellPlanner perspective is that the Citrix option is selected at installation of the TEMS CellPlanner Client.

17.1.3 Problems with Using C: in a Citrix Farm

If you administer a Citrix farm, consider that users may be logged on to any Citrix server in the farm. Data stored on the C: drive during one session will no longer be accessible if the user logs on to another Citrix server in the next session. All data to reuse between sessions should be stored on a mapped network drive, not on C:

17.1.4 Environment Variables in Citrix Environment

The user profile of every TEMS CellPlanner Client user is stored in a *target folder*. The user profile is created the first time the user opens TEMS CellPlanner Client, and can be updated from the TEMS CellPlanner Client.

The target folder is defined by environment variables. Before a user logs onto TEMS CellPlanner Client, you must as administrator ensure that the target folder exists and set the environment variables for the user, preferably in a login script. The default target folder, changeable by the system administrator, is by default:

```
%USERPROFILE%\TEMSTCP\<release number>
```

where `USERPROFILE` is defined in the Citrix server. Example:

```
%USERPROFILE%\TEMSTCP\9.1.0
```

17.1.5 Memory Reservation in Citrix Environment

In a Citrix environment, you configure the memory per TEMS CellPlanner Client user in the **TCP_mem.bat** file.

Note that the parameter **Client Application** in the Max Memory Allocation part of the **Application Preferences** window, used to reserve memory in a non-Citrix environment, is ignored in a Citrix environment.

If the error message

```
Can not initialize java heap
```

appears for any TEMS CellPlanner Client user, reduce the amount of reserved memory for the TEMS CellPlanner Client.

17.2 Prepare for TEMS CellPlanner in a Citrix Environment

Read this if you are administrator of the Citrix server.

Before installing the TEMS CellPlanner Client in a Citrix environment, you need to take the actions described below.

Prerequisites

- Read About TEMS CellPlanner in a Citrix Environment on page 17-2.
- You must have administrator privileges on the computers where you install and configure the TEMS CellPlanner software.

Procedure

1. Install TEMS CellPlanner License Server software on the license server computer and load a network license file, see Installing License Server on page 14-1. You can only use network licenses, not stand-alone licenses, in a Citrix environment.
2. Install the geodata files (maps with geographic information); see the co-location advice in About TEMS CellPlanner in a Citrix Environment.
3. If TEMS CellPlanner projects are stored on server:
   - if stored on an Enterprise Server, follow instructions in Installing Oracle Software and Creating Database for the Oracle database server, and Installing Enterprise Server for the computer where projects are stored.
   - if stored on a Zero Admin Server, follow instructions in Installing Zero Admin Server for the computer where projects are stored.

17.3 Install TEMS CellPlanner Client on a Citrix Server

Read this if you are administrator of the Citrix server.

If you install TEMS CellPlanner Client in a Citrix farm, repeat this procedure for all Citrix servers.

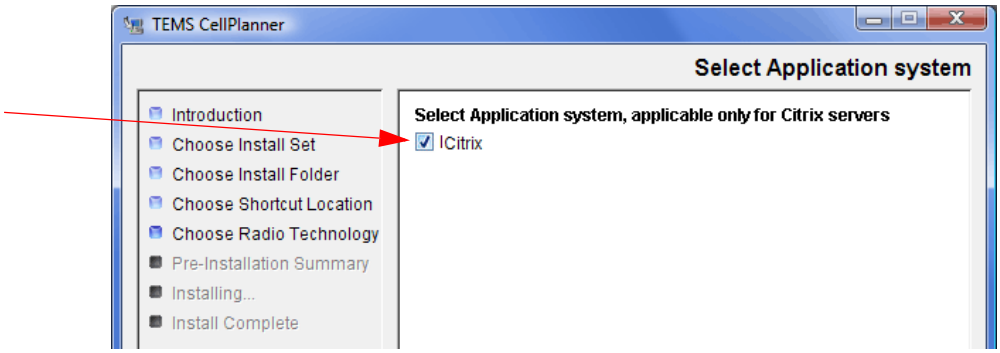
Prerequisites

- You must have administrator privileges on the Citrix server
- Read About TEMS CellPlanner in a Citrix Environment on page 17-2
- Plan where shared files, like maps, projects and calculation results shall be located, considering Problems with Using C: in a Citrix Farm
- The Citrix Presentation Server software is installed on the Citrix server
- Prepare for TEMS CellPlanner in a Citrix Environment

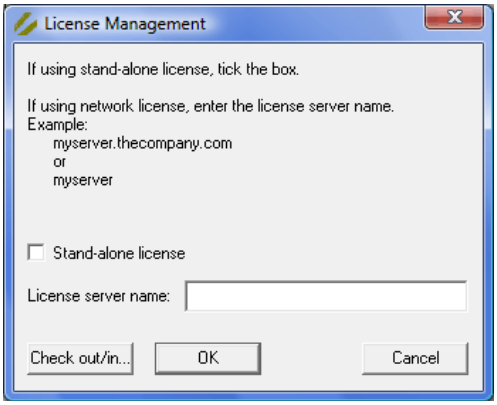
Procedure

1. When Installing TEMS CellPlanner, enter the information below.

   a. Select the Citrix option in the **Choose Radio Technology** window:



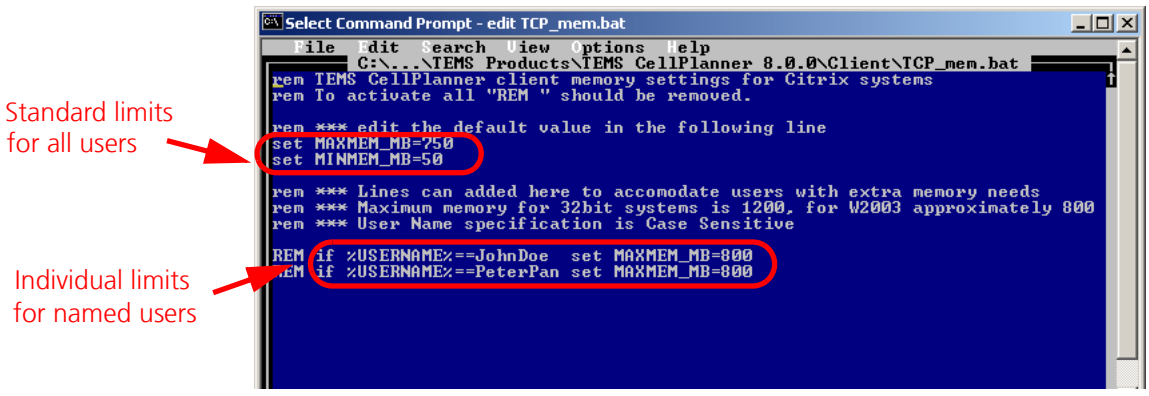
   b. Enter the license server name in the **License Management** window:



3. Open the **TCP_mem.bat** file for edit. Location example:

   C:\<Program Files>\Ascom\TEMS Products\TEMS CellPlanner 9.1.0\Client**TCP_mem.bat**

   The **TCP_mem.bat** file looks as follows:


Standard limits for all users
Individual limits for named users
Select Command Prompt - edit TCP_mem.bat
File Edit Search View Options Help
C:\...\TEMS Products\TEMS CellPlanner 8.0.0\Client\TCP_mem.bat
rem TEMS CellPlanner client memory settings for Citrix systems
rem To activate all "REM " should be removed.
rem *** edit the default value in the following line
set MAXMEM_MB=750
set MINMEM_MB=50
rem *** Lines can added here to accomodate users with extra memory needs
rem *** Maximum memory for 32bit systems is 1200, for W2003 approximately 800
rem *** User Name specification is Case Sensitive
REM if %USERNAME%==JohnDoe set MAXMEM_MB=800
REM if %USERNAME%==PeterPan set MAXMEM_MB=800

4. In TCP_mem.bat, configure the amount of RAM memory to reserve for all TEMS CellPlanner Client users or per TEMS CellPlanner Client user.

   Explanation of parameters:

MAXMEM_MB	Upper limit for dynamic memory reservation. Set this value as large as possible.
MINMEM_MB	Starting value for memory reservation.

   To set individual limits, enter the user name and remove the leading "REM".

   If you encounter memory reservation problems as described in Memory Reservation in Citrix Environment on page 17-3, reduce the requested RAM size in **`TCP_mem.bat`**. Start with maximum 1024 MB per user and go down until the TEMS CellPlanner Client can be launched.

5. Select radio technologies and other licensed features by opening the Application Preferences window from **Start↗Programs↗Ascom↗TEMS Products↗TEMS CellPlanner 9.x.x↗Utilities↗Application Preferences**. The selection will apply to all TEMS CellPlanner users. See details in *Select Licensed Features* in *TEMS CellPlanner Common Features User's Guide*.

6. Set environment variables, see Environment Variables in Citrix Environment on page 17-3.

7. Make the TEMS CellPlanner Client available for Citrix clients by publishing the **`TCP.bat`** file in the installation folder, using the Citrix Access Management Console. Example of a **`TCP.bat`** file:

   ```
   C:\<Program Files>\TEMS Products\TEMS CellPlanner
   9.1.0\Client\TCP.bat
   ```

8. Ensure that intended Citrix users have access to the TEMS CellPlanner Client as a Citrix application.

9. Communicate rules for configuration of shared folders to the TEMS CellPlanner Client users:

   - **File↗Project Settings, General** tab, parameter Common calculation result directory
   - **File↗Project Settings, Maps** tab, parameter Map root directory

17.4 Use TEMS CellPlanner in a Citrix Environment

Use the TEMS CellPlanner Client program on the Citrix server from your local client computer, as if you were directly logged on to the Citrix server and opened the TEMS CellPlanner Client from there.

The example in About TEMS CellPlanner in a Citrix Environment shows four different client users.

All file operations refer to directories on the Citrix server. To access files on another computer, enter the full path including the network location of the file.

Prerequisites

- The steps in Install TEMS CellPlanner Client on a Citrix Server have been taken by the administrator of the Citrix server
- You have access to the Citrix server

Procedure

1. Login from your local computer to the TEMS CellPlanner Client on the Citrix server. A Citrix window is opened with the TEMS CellPlanner Client application within it.
2. Use the TEMS CellPlanner Client program.
3. Close the TEMS CellPlanner Client window when you are ready. The Citrix window is closed and you are logged off from the Citrix server.

Index

A

account information 7-8, 11-3, 11-28, 12-3, 12-22, 13-2
  definition 7-2
  migrating 7-2
  recording 7-2
  reentering 7-9
Application Preferences 17-3
ATI Radeon graphic card 4-7, 8-9
AutoPlay 4-6
autorun 4-6

C

Citrix environment 17-1, 17-3
  Citrix farm 17-2 — 17-3
  Citrix installation option 17-5
  environment variables 17-3
  installing TEMS CellPlanner in 17-4
  memory reservation 17-3
  network view 17-2
  required operating system 4-7
  using TEMS CellPlanner in 17-7

D

database
  creating 10-5
  Database Control URL 10-15
  SID 10-15
  tablespace
    creating 10-16, 11-3
    initiating database tables in 11-15
  users
    administrative 10-12
    TEMS CellPlanner Server 10-26, 10-34, 10-41, 11-4
dedicated license server 9-4
DirectDraw 4-7, 8-9

E

Enterprise Server 11-2
Enterprise Server. 11-9

H

hardware (dongle) locked license 6-2
hardware recommendations 4-2
hardware requirements 4-2

I

Installation
  TEMS CellPlanner licenses 6-1
installation
  network license file 14-5
  Oracle database 10-5
  stand-alone license file 5-13
  TEMS CellPlanner Client 5-3
  TEMS CellPlanner License Server 14-3
  TEMS CellPlanner Server 11-7, 12-6
  TEMS CellPlanner User Administration 13-3

J

JBoss 11-20
JBoss TCP Server 11-5, 11-18, 12-12
JMX 11-20, 12-15

L

license lock types
  hardware (dongle) locked 6-2
  software locked 6-2
license types
  network license 6-2
  stand-alone 6-2
licenses
  acquiring 6-6
  backing up 6-7
  clock tamper detection 4-7

loading 6-6
lock file lock.txt 6-5
lock.exe 6-5
moving to other computer 6-10
stand-alone license 5-11

M

measurement files,log files 5-14
memory 4-3
memory allocation
default 8-3
in client computer 8-5
in server computer 8-3
migrating to new version 7-1
calculation results lost 7-3
exporting 7-4, 11-3, 12-3
importing 5-13, 7-5
migration process
project files 7-4
supported migration paths 7-3

N

network license 6-2
installing 14-5

O

Oracle database 9-4

P

project files
exporting 7-4
importing 7-5
migrating 7-4
projects
migrating 7-2
projects in database
migrating 7-6

R

RAM memory 4-3
RAM reservation
default 8-3
in client computer 8-5
in server computer 8-3
recommendations
hardware 4-2
memory 4-3
requirements
hardware 4-2

S

Sentinel Service 6-5, 14-5
software locked license 6-2
stand-alone license 6-2
installing 5-13

T

tcpserver-ds.xml 11-14
TEMS CellPlanner Client
changing memory reservation 5-12
installation process 5-2
installing 5-3
selecting license type 5-11
uninstalling 16-1
upgrading 5-3
TEMS CellPlanner License Server 14-2
installing 14-3
installing network license file 14-5
overview 9-4
uninstall 14-7
uninstalling 16-1
TEMS CellPlanner Server 11-2, 12-2
initiating administration 11-23, 12-18
installation process 11-2, 12-3
installing 11-7, 12-6
starting
as ordinary process 11-18, 12-13
as Windows service 11-17, 12-12
stopping
ordinary process 11-5, 12-5
Windows service 11-4, 12-4
uninstalling 16-1
upgrading 11-7, 12-6
TEMS CellPlanner User Administration 13-2
installing 13-3
overview 9-5
uninstalling 16-1
TEMS Investigation 5-14

U

uninstallation
TEMS CellPlanner components 16-1

Z

Zero Admin Server 12-2, 12-8